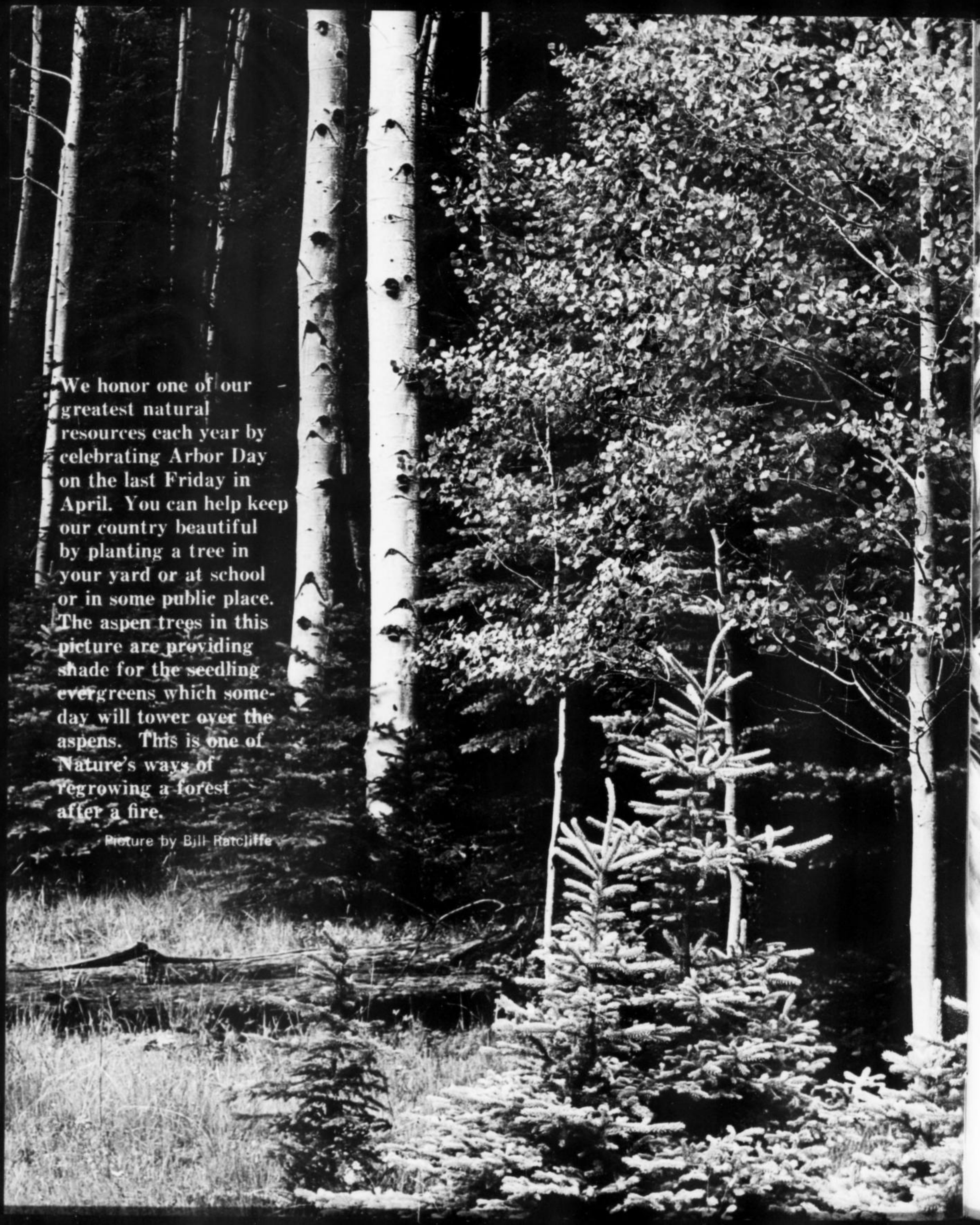
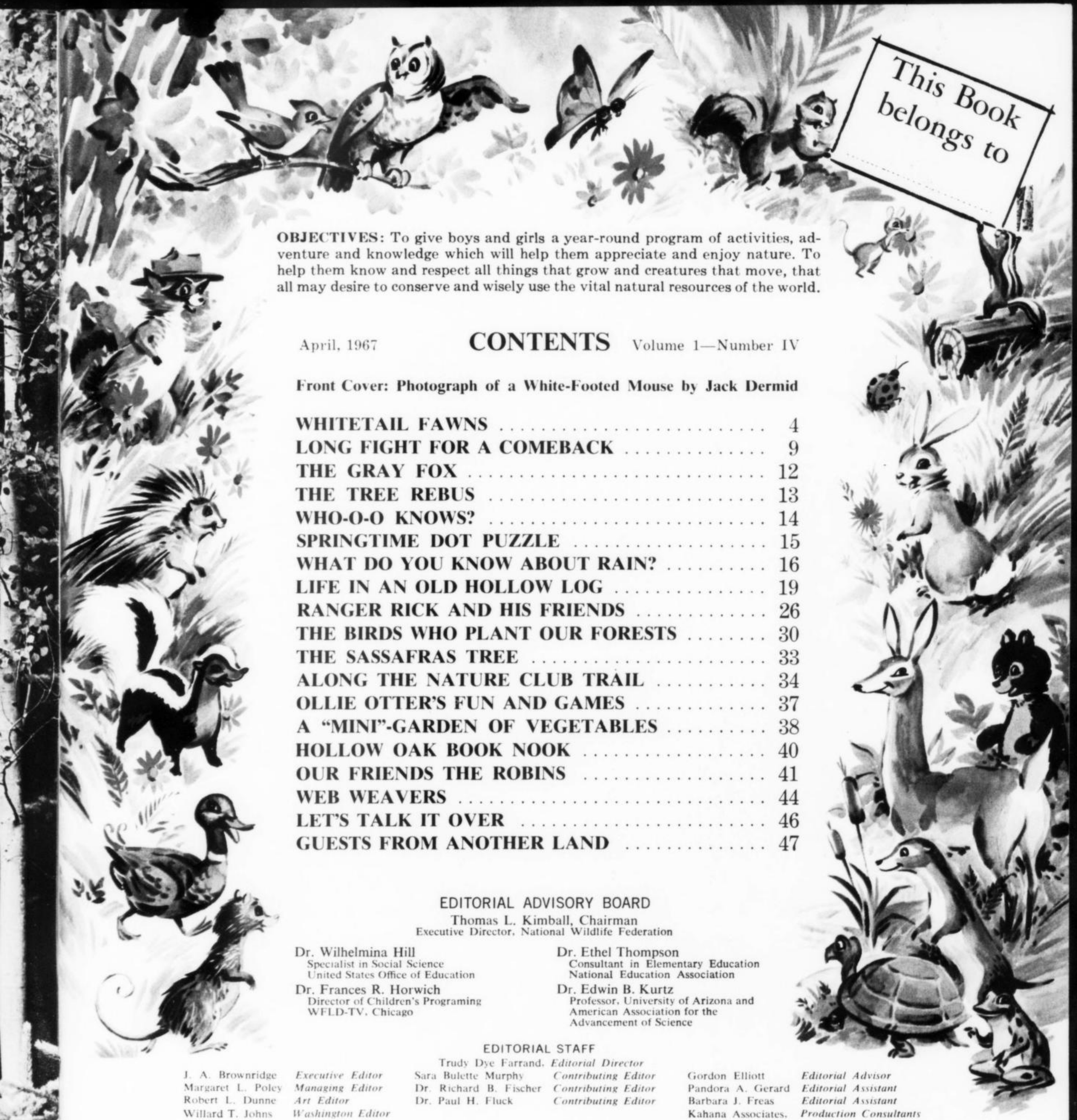
# Ranger Rick's nature magazine

April, 1967

PUBLISHED BY THE NATIONAL WILDLIFE FEDERATION


We honor one of our greatest natural resources each year by celebrating Arbor Day on the last Friday in April. You can help keep our country beautiful by planting a tree in your yard or at school or in some public place. The aspen trees in this picture are providing shade for the seedling evergreens which someday will tower over the aspens. This is one of Nature's ways of regrowing a forest after a fire.
Picture by Bill Ratcliffe




**OBJECTIVES:** To give boys and girls a year-round program of activities, adventure and knowledge which will help them appreciate and enjoy nature. To help them know and respect all things that grow and creatures that move, that all may desire to conserve and wisely use the vital natural resources of the world.

April, 1967

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# White-tail

# fawns

Story and Pictures by
Leonard Lee Rue, III

*A young fawn is equipped at birth to hide from danger. Nature has given it a spotted coat which, when the fawn is lying down or standing still, makes it hard to see in the wood or fields.*

The day is warm and the sky is blue. As the wildflowers nod happily to each passing breeze, the bees are busily visiting each flowerhead to gather food and are covered with the golden sequins of pollen grains. Proud of its bright new green leaves, each tree gently waves its limbs. The fluttering of the leaves makes dancing patterns on the forest floor below.

Snuggled into a small hairy ball, a newborn fawn lies hidden beneath a lacy fern. Its white-spotted brown coat makes it almost invisible. Only when it twitches an ear at an annoying fly does it give any sign of life. Because it is practically odorless, even a dog would have trouble finding it. Its twin, looking like a carbon copy, lies hidden at the base of an old oak tree about ten feet away.

The average person walking through the forest would pass by the fawns without ever seeing them. That is the purpose of the fawns' spotted coat, to camouflage or to hide them.

If a person were to discover one of the fawns, his first impression would be that the fawn was lost because its mother was not in sight. Such a person would be likely to take the fawn home thinking that he was doing the right thing. Nothing could be farther from the truth.

In the first place the doe, for that is what a female deer is called, knows exactly

*Please turn the page*

where her fawns lie hidden. She purposely stays away from her babies so as not to attract attention to them. The tiny fawns can easily remain hidden, but the much larger doe might be seen. Also, the doe seems to realize that her body odor would attract enemies to her little ones. So rather than stay with the fawns all the time, the doe stays away except when it is time to nurse.

When the fawns are first born, the female will weigh about 4½ pounds while a buck (the male deer) will weigh about 5½ pounds. The fawns are usually born about one half hour apart.

After birth the fawns are soaking wet and the mother carefully licks each baby dry with her rough tongue. A fawn can usually begin to stand up in about six minutes and often can walk a few hesitant steps in ten minutes. At first the fawns have very poor control over their legs, just like all newborn babies. They walk stiff-legged as if they were puppets being pulled by strings. The doe in her anxiety to clean the fawns thoroughly often licks them so forcefully she knocks them over.

*A newborn fawn nurses while its mother is lying down.*

Often even before they can walk the fawns will stumble over to the mother's milk bag and begin to nurse. Even while the fawns feed, the doe continues cleaning them. Within an hour's time the doe will lead her babies away from the spot where they were born. She then hides them where they won't easily be seen. Then the doe leaves them alone.

The doe will go just far enough away so that she can still see her babies or hear them if they should cry out. A young fawn bleats almost like a baby lamb. If danger comes near the fawns, the mother will attempt to lure it away by showing herself. In some cases if the danger is from a small animal such as a dog, the doe may try to drive it away. Does have been known to kill snakes that crawled near their fawns. A mother deer's sharp hooves are very effective weapons.

The doe will come back to the fawns four or five times a day to allow them to nurse. The fawns can drink eight ounces of milk in less than a minute. When they nurse, the fawns usually spill part of the milk out of their mouths like froth so that it looks as if they have shaving cream on their faces.

After the fawns have nursed, they lie down and the doe leaves them again. Occasionally the fawns try to follow their mother. One doe that I was watching had trouble with a fawn that wanted to follow her. Finally she took one of her front feet and putting it across the baby's back, pressed until the little one lay down. Then she left to find food for herself or to rest.

After four or five days the fawn's hooves, which were soft at birth, begin to dry and harden. By the time the fawn is three weeks old it is big and strong enough to be able to accompany the doe when she feeds.

*Please turn the page*

*Twin fawns are hard to see snuggled together in the forest.*

completely and will eat only foliage.

Some mother deer are just like some human mothers. They are very proud of their babies and sometimes spoil them.

All deer, young and old alike, have bright reddish-brown hair in the summertime. It is thin and solid and provides protection against insects. In September the deer all shed their summer coats and get their brand-new winter coats. The winter hair is long, kinky, hollow and filled with air. This coat keeps the deer snug and warm. It is in September that the fawns lose their spots as they get their winter coats. Now the fawns look exactly like miniature adult deer.

You may have noticed that I haven't mentioned the buck or father deer. That is because the buck does not have anything to do with the doe or the fawns in the spring or summer.

While the doe is giving birth to the fawns and raising them, the buck is also raising something—his new antlers.

Each year a buck's antlers fall off, usually in December. Along about April, two bumps or bases start to swell on his head, and the new antlers begin to grow, covered with a fuzzy coat of veins called "velvet." They continue to grow until the middle of September when the velvet dries up and is rubbed off. Underneath, the antlers have become hard, dry, strong and pointed.

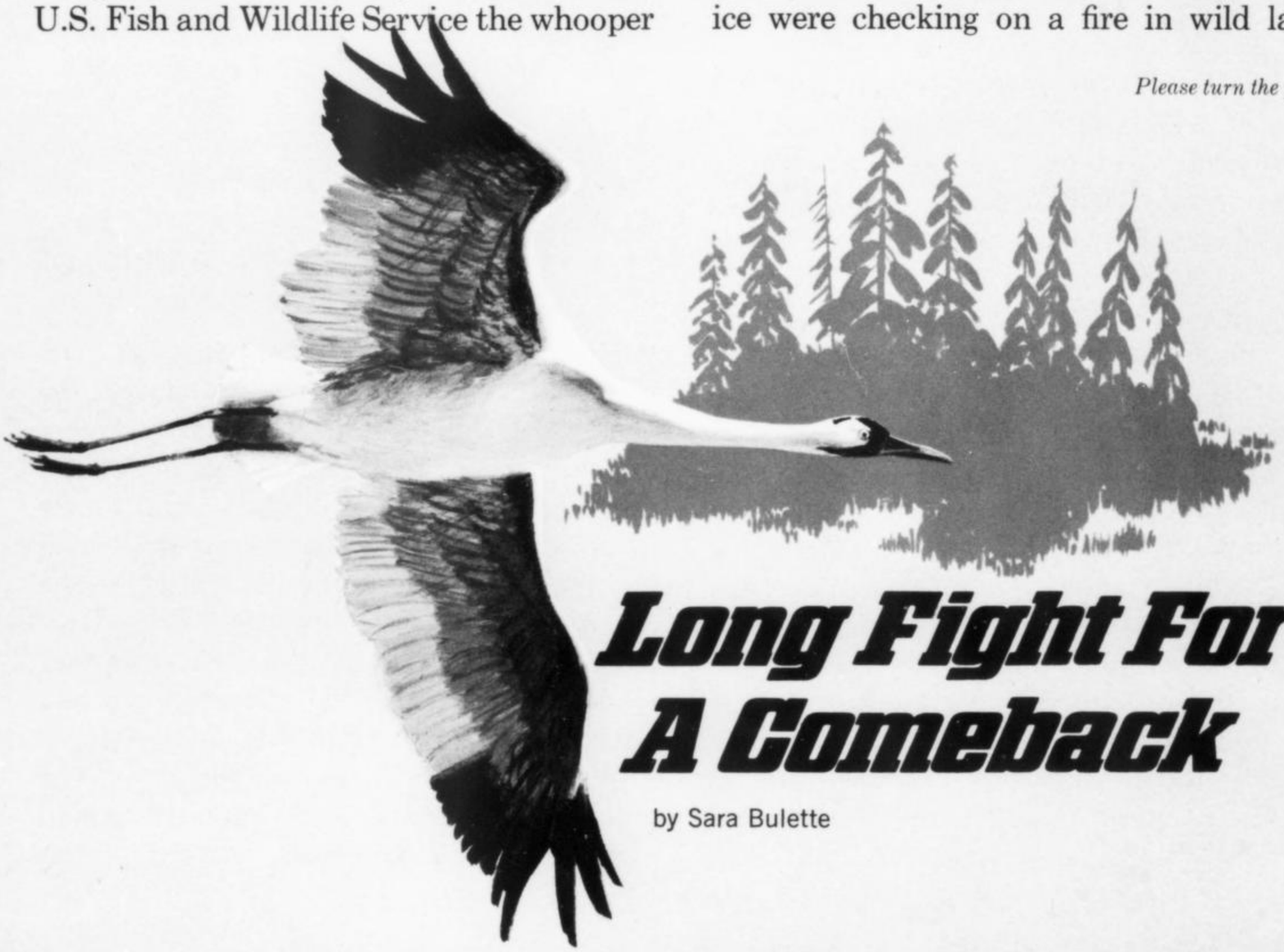
A buck fawn does not grow antlers on his head during his first summer. All he produces is a pair of tiny knobs which show where his future antlers will be. Because of these knobs he is often called a "button buck."

The spotted fawn grows quickly to be like its mother or father. It will wander through the woods alone. Now it is a yearling. THE END

*Editor's note: Remember! if you should ever find a fawn lying out in the woods, don't touch it, don't pick it up and don't try to take it home. The fawn is not lost. Its mother usually knows exactly where it is at all times. And she is equipped by nature to do a much better job of raising her own babies than we are.*

# Long Fight For A Comeback

by Sara Bulette



Millions of birds were hatched in the North last spring and lived to fly south in the fall. Only two of them were whooping cranes.

How do we know? Because there is only one known place in the world where wild whooping cranes spend the winter. Regularly they arrive in mid-November at the Aransas National Wildlife Refuge on Texas tidelands along the Gulf of Mexico. Just as regularly the wildlife specialists at Aransas check each one in as though the whoopers were fighter planes returning to their home aircraft carrier.

Last year forty-three of the whooping cranes made it to the refuge. But among them were only two rusty-brown young whooping cranes who had been born in Canada.

Thirty years ago when the Aransas refuge came under the protection of the U.S. Fish and Wildlife Service the whooper count was down to fourteen. That was too few, many experts feared, to enable the birds to keep their kind alive much longer. But wildlife-management men were determined to give the whoopers all possible help.

At Aransas from mid-November until spring, the whoopers had ideal living and feeding conditions. But no one could know what happened to them during the half year while they were breeding and nesting. In mid-April they took off northward and soon after they crossed the Canadian border, they were swallowed up by the wilderness.

For years, teams of wildlife specialists flew thousands of air miles over the Canadian wilderness without seeing a single whooping crane. Thirteen years ago the first real break came by accident. Two members of the Canadian Forestry Service were checking on a fire in wild lake

*Please turn the page*

Soon after they arrive at their summer home, each pair of whoopers does a colorful mating dance. The male bird bows and leaps high in the air in front of his mate, at the same time whooping loudly.

Unlike most other birds, the female crane joins in the dance jumping high in the air nearly as often as does her mate. She also bows and splashes in the shallow water where the dance is usually performed. After mating the two birds stay together as long as they live.

Drawings by Bob Hines

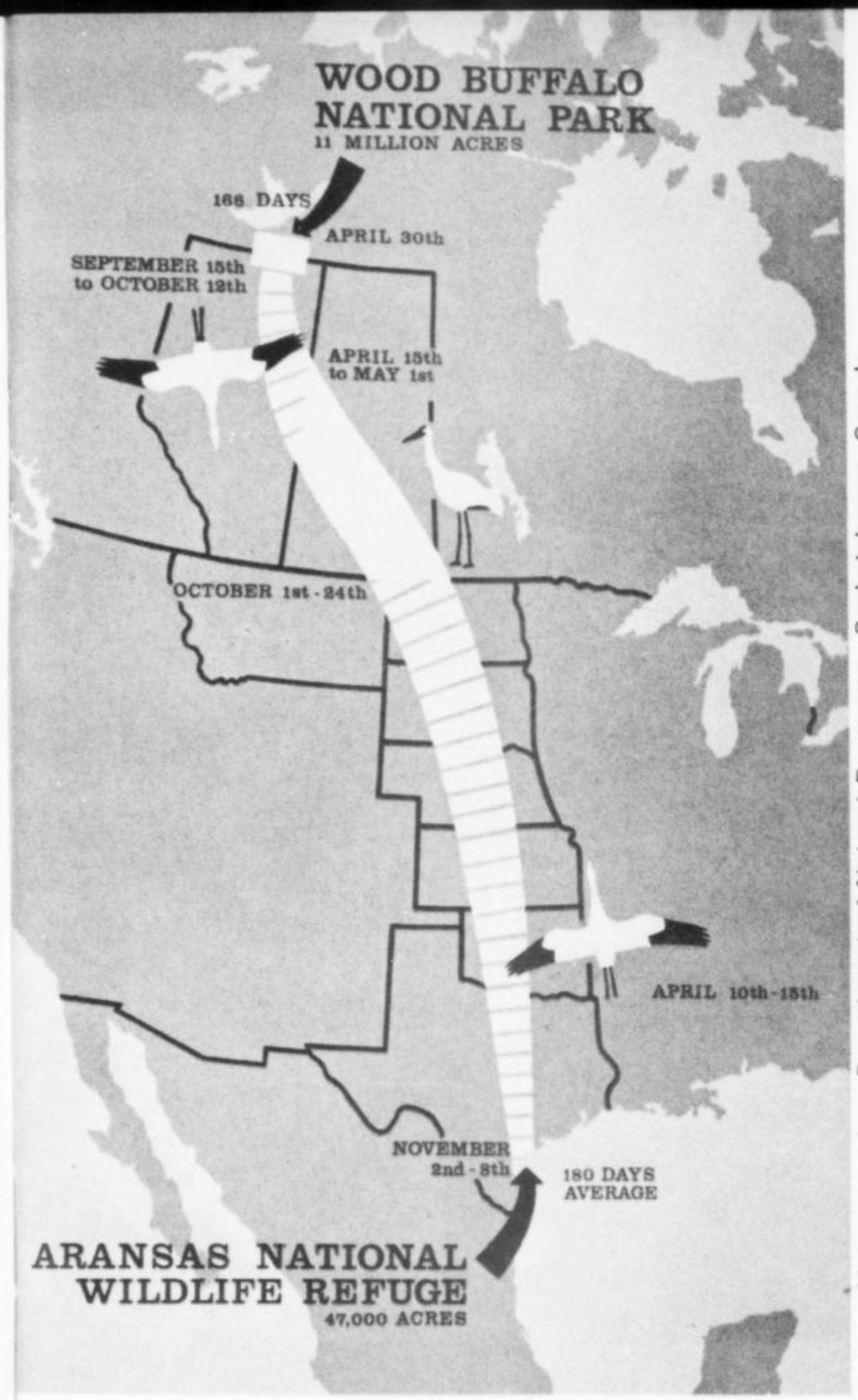
country near the Arctic Circle. They spotted and reported a pair of whooping cranes. Later trips by air, canoe and back-pack proved that whooping cranes were nesting in Wood Buffalo National Park on land that was protected by the Canadian government.

Now the whoopers' nesting and breeding habits in the Far North are as well known as their living and feeding habits at Aransas. Whooping cranes must live in completely wild places. They mate for life and produce only two eggs a year. On their twice-yearly flights of 2500 miles they encounter many dangers. The fall flight during hunting season is especially risky. It's a wonder that *any* young-of-the-year arrive at Aransas.

Soon—around April 15th—forty-three whooping cranes will take off for the North. The two young of last year now have snow-white feathers with black wing edges like their parents'. But they have not yet reached their full height of five feet and wingspread of seven feet. So far they have lived only with their parents. At Aransas each family stakes out a mile-square territory. And woe to the stranger whooper who tries to cross the boundary.

Right now the cranes are restless. The males use their long bills to nudge the young, hinting that it's time to take off on their own. Meanwhile the male and female rehearse their high-leaping dance of courtship. Then one day a male will fly almost out of sight and circle in the air, trumpeting its loud "Ker-loo! Ker-lee-oo!" which sounds like an Indian war whoop. The female and young fly up and circle too, and the family heads north.

Within a few days all the whoopers will have left Aransas, in families or small groups of unmated birds. They fly high




Picture courtesy Department of Natural Resources, Saskatchewan, Canada

*The path marked on this map shows the route which whooping cranes follow to reach their summer home in the far northern part of Canada.*

*Young cranes are able to leave the nest on the day they hatch.*

and fast over Texas, Oklahoma, Kansas, Nebraska and the Dakotas. The journey to Wood Buffalo National Park takes about twenty-two days, for the whoopers must come down to feed and rest.

When a family arrives in the wild lake country, the young one is driven off in earnest. It may join other unmated whoopers or wander and feed alone all summer. It is not yet ready to start its own family.

The female chooses a spot among tall reeds growing in shallow, marshy waters near a lake shore. She builds a three-foot platform with its top edge a safe foot above the water. Here she lays two speckled, olive-drab eggs a little larger than a chicken's. She and her mate take turns keeping them warm, carefully turning them so the young will develop properly. When they hatch after thirty-one days, the chicks are a little larger and longer-legged than the barnyard kind.

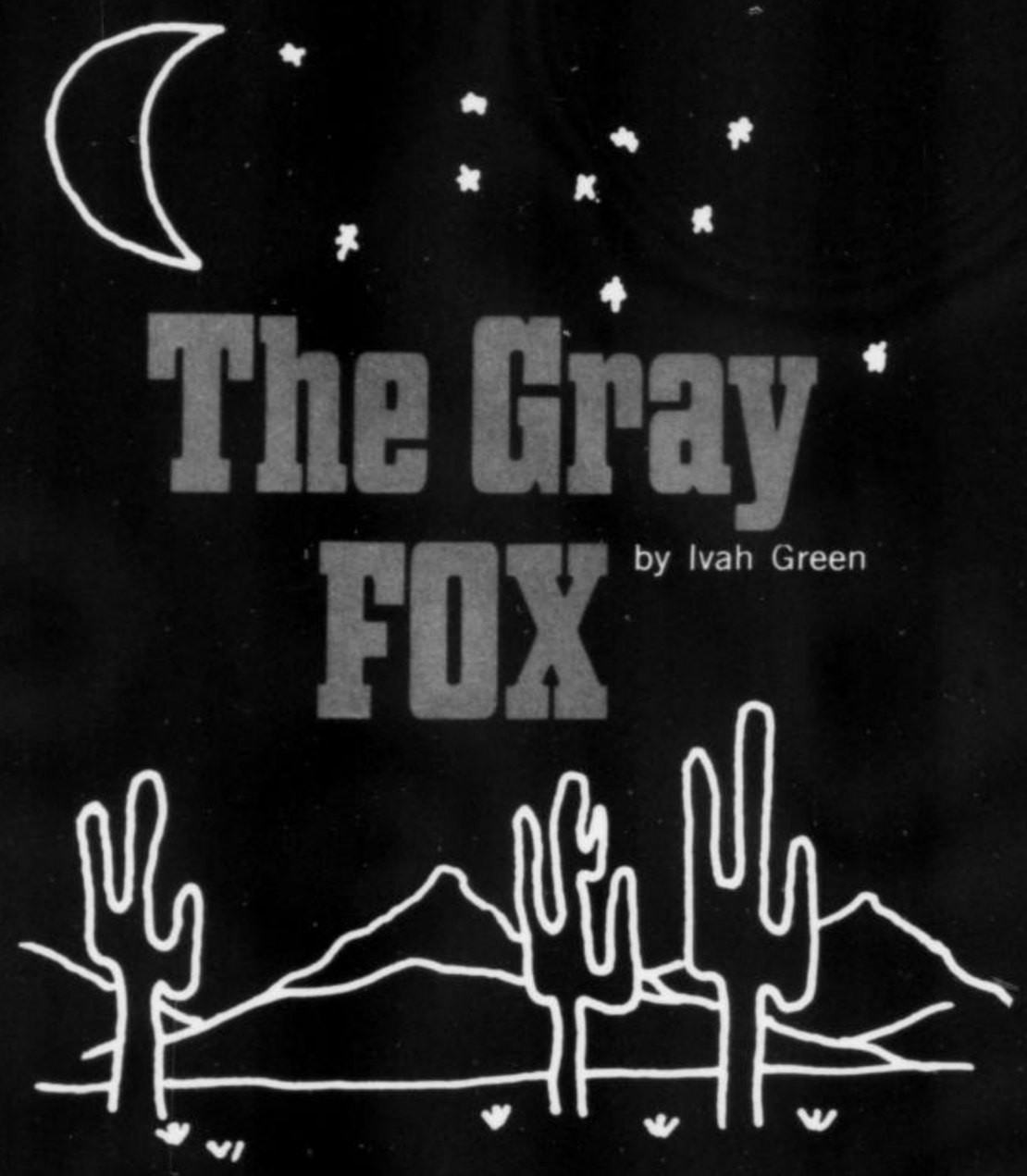
They cheep all day and follow their mother wherever she goes. The male—always on guard against owls, eagles and foxes—stays close by. Both parents feed the chicks from morning till night. Despite their care, they are lucky to bring even one chick through its first two weeks. By then it is a foot tall. In six weeks its orange down is replaced by brown feathers and it is finding much of its own food. But it will take all the months ahead, until mid-October, to grow strong flight feathers for the 2500-mile flight back to the Aransas refuge.

In the best year yet—1964—ten young-of-the-year arrived at Aransas. Another year like that would put the whoopers over the top, for fifty is considered the smallest possible number needed to give them a good chance of winning their long fight for a comeback.

THE END

# The Gray FOX

by Ivah Green



When darkness falls on the desert, the gray fox leaves his hideout in a canyon, and with a hoarse barking announces he is about to begin his nighttime of hunting. He heads for a Boojum tree out on the desert floor and becomes silent and watchful as he searches for something to eat.

The gray fox takes all his food alive. But since he cannot run as fast as some of the creatures he preys upon, he silently sneaks up on them and then, with a leap, he knocks them down. As he springs, he strikes with both front paws the way a cat does. He will take birds, bird eggs, snakes and lizards when he finds them. He will eat berries and cactus fruits when he does not find enough meat to satisfy him.

Although he is a successful hunter, he is preyed upon by wildcats and jaguars, so he must be constantly on the alert to stay alive.

A gray fox is a handsome animal. He has gray fur with reddish-yellow markings in back of the ears and on the sides of his neck. These markings are also on his legs, the underparts of his body and tail. His twelve-inch bushy tail is tipped with black. His long ears have an acute sense of hearing. His eyes are a brilliant yellow-green. His curiosity leads him to investigate anything unusual. He weighs from seven to thirteen pounds and is about forty inches long.

In January or February a mated pair of gray foxes make a den in a deep burrow in the ground or in an opening in the rocks of a canyon. Sometime in April or May a litter (from three to five) of fox babies—known as *kits*—is born. They are deaf and blind at birth and have but a scant fur covering which is darker than that of their parents.

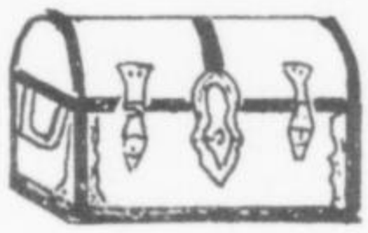
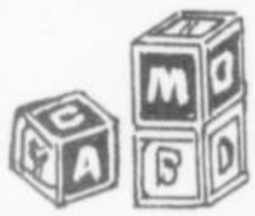
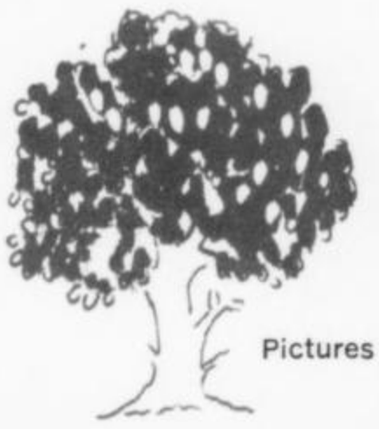
The male gray fox is a devoted father. Night after night as the young foxes are being weaned, he brings his captured prey to the den. In a few months the pups will go out on the desert to hunt alongside their parents, and eventually each will hunt alone.

*Editor's note: The gray fox also lives in areas other than the desert. It may be found over almost all the United States.*

Picture by Allen M. Pearson U.S. Fish and Wildlife Service

# TREE REBUS

by Margo Duryeá

I AM A . I HAVE A  . IN MY TRUNK ARE HOMES FOR . ON ONE BRANCH IS A . I ALSO HAVE BUDS THAT GROW INTO BEAUTIFUL IN THE SPRING. THE LEAVES GIVE FOR LITTLE TO PLAY IN. IF YOU CUT ME INTO PIECES, I AM USEFUL IN MANY WAYS SUCH AS  . BEAVERS USE MY TWIGS AND TRUNKS TO MAKE DAMS. I ALSO CAN BE MADE INTO AND . THE AND MAKE ME GROW VERY AND MY WILL GROW VERY DEEP. THEN I WILL HOLD THE SOIL IN PLACE WHEN THE COME. WHEN THE BLOWS I SHAKE MY BRANCHES AND MY FALL TO THE GROUND. SOMETIMES PLANT THEM AND THEY BEGIN TO GROW INTO NEW . I AM TO BE A 

Pictures by Marion Broida



Picture By Allen M. Pearson ©3. Pearson Education, Inc.

# WHO-O-O KNOWS

by Wise Old Owl

## Sound-Alike Quiz

The missing words in the sentences below all sound like the names of insects or animals, but they are not always spelled the same.

1. In winter the trees are _ _ _ _.
2. Mary has curly brown _ _ _ _.
3. Bill has a new baseball _ _ _.
4. Your mother's sister is your _ _ _ _.
5. Birds _ _ _ in the air.
6. George wants to _ _ a scientist.

## More-About

Did you ever notice that the more interested you are in something, the more you try to find out about it? The more you learn, the more questions you have!

Well, let me remind you there *is* a "more-about" place. It is the library—a wonderful place to find out *more about* everything.

Suppose, for instance, you wondered about "the tiny building blocks of water—molecules" mentioned in the rain story on Page 16. There is a whole world of things-to-discover about molecules. But we couldn't begin to tell all about them if we wanted space left to tell about rain. However, there are books in the library with pictures and words so carefully presented that even young children can get a better idea of molecules—the building blocks of all matter. Your librarian can help you find the best book for you.

If you are lucky enough to have a school library, I can suggest a great project for your Nature Club this month. First, go through your copies of Ranger Rick's Nature Magazine and pick out things you want to read *more about*. Take the magazine to your librarian and ask her to help you find the books you need. She may even want to set up an exhibit of books that go with the different Ranger Rick articles you choose. National Library Week begins on April 15. Your librarian will be looking for exhibit ideas that really have interest.

## The Question Box

*What are the smallest and largest birds in the world?*

*—John Wolham, Age 8, N.Y.*

The bee hummingbird of Cuba is the smallest. It is two and one half inches from tip of bill to tip of tail. The largest bird is the ostrich of Africa. It may reach a height of eight feet.

*Isn't butterfly #2 on Page 27 (January issue) a red-spotted purple instead of a spicebush swallowtail?*

*—Leigh Potter, Age 8, Ohio*

Yes, it is. Thank you for catching our mistake.

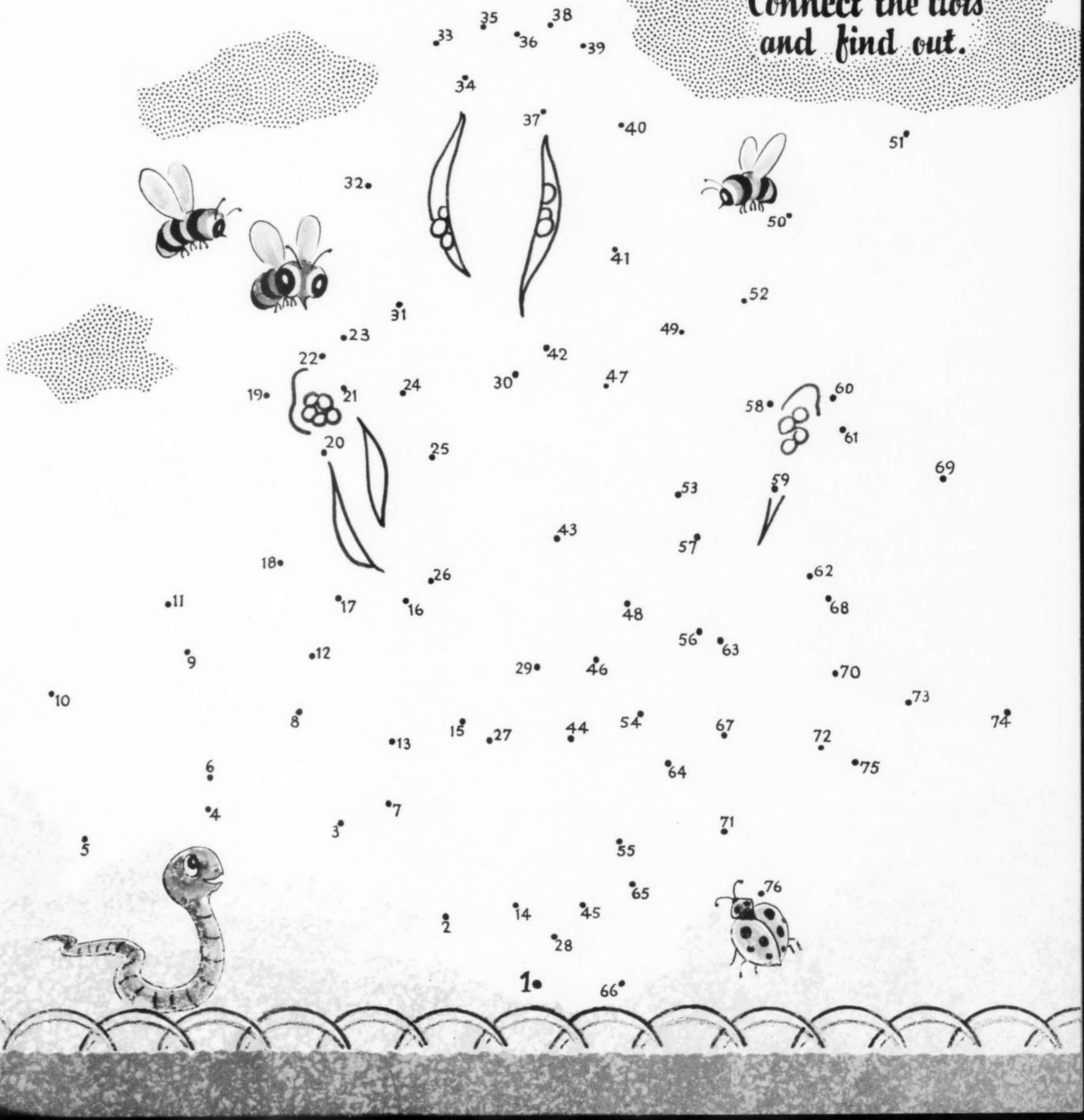
***Note:*** Questions for Wise Old Owl should be sent to him at the address on Ranger Rick's mail box on Page 34.

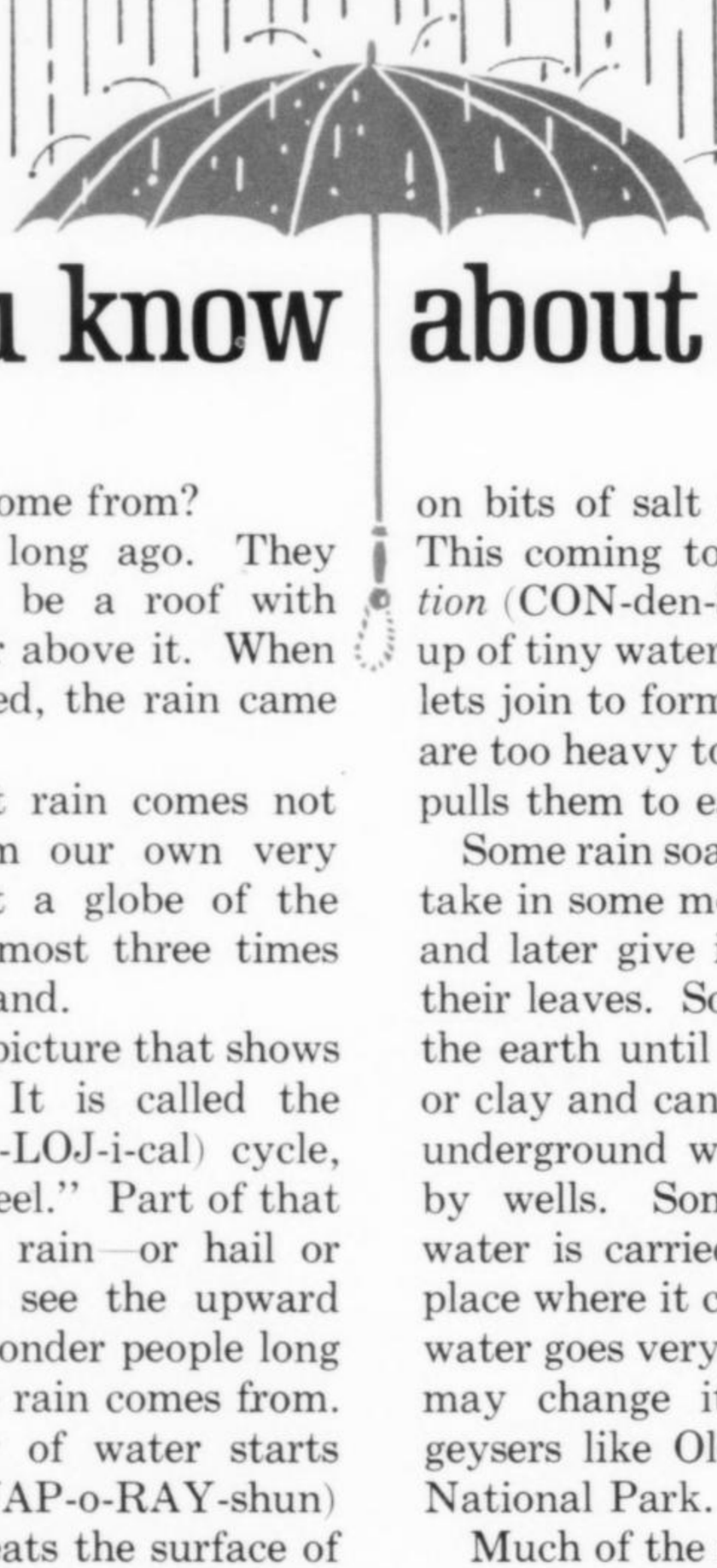
ANSWERS to Quiz: 1. bare (bear); 2. hair (hare); 3. bat; 4. aunt (ant); 5. fly; 6. be (bee).

# SPRINGTIME

by Peggie Geiszel

**Connect the dots and find out.**





# What do you know about rain?

by Sara B. Murphey

Where does the rain come from?

This puzzled people long ago. They thought the sky must be a roof with windows in it and water above it. When the windows were opened, the rain came pouring down.

Today we know that rain comes not from the sky but from our own very watery earth. Look at a globe of the world. You will see almost three times as much blue ocean as land.

On the next page is a picture that shows what really happens. It is called the *hydrological* (HIGH-dro-LOJ-i-cal) cycle, which means "water wheel." Part of that cycle we see as falling rain—or hail or snow. But we do not see the upward journey of water. No wonder people long ago could not tell where rain comes from.

The upward journey of water starts when *evaporation* (ee-VAP-o-RAY-shun) takes place. The sun heats the surface of the oceans and other bodies of water. The warmer the water gets, the faster its tiny building blocks, called *molecules*, dance about. Some are bounced right out into the air. They are still water molecules, but now they are much farther apart. They have become an invisible gas which we call water vapor. When water turns from a liquid to a gas we say it *evaporates*.

The water vapor mixes with other gases in the air and is carried upward and cooled. As it cools, its molecules come closer together and form water droplets on bits of salt and dust high in the air. This coming together is called *condensation* (CON-den-SAY-shun). Clouds, made up of tiny water droplets, form. The droplets join to form larger drops. When they are too heavy to be held up by air, gravity pulls them to earth as rain.

Some rain soaks into the ground. Plants take in some moisture through their roots and later give it back to the air through their leaves. Some water sinks lower into the earth until it strikes waterproof rock or clay and can go no farther. This is the underground water which can be tapped by wells. Sometimes the underground water is carried along until it gets to a place where it can come up as a spring. If water goes very deep, the heat of the earth may change it to steam. This causes geysers like Old Faithful in Yellowstone National Park.

Much of the rain that falls finds its way to streams and then to rivers and finally into seas. Have you ever wondered why the water in lakes and oceans doesn't sink into the earth? Their bottoms are made of waterproof rock or clay.

Always, from the surface of the sea and other bodies of water, from the moist parts of the earth, from the leaves of plants and the breath of animals, and even from the clothes on our washlines, water is going back to the air as water vapor. Clouds form, and the rain cycle starts all over again.

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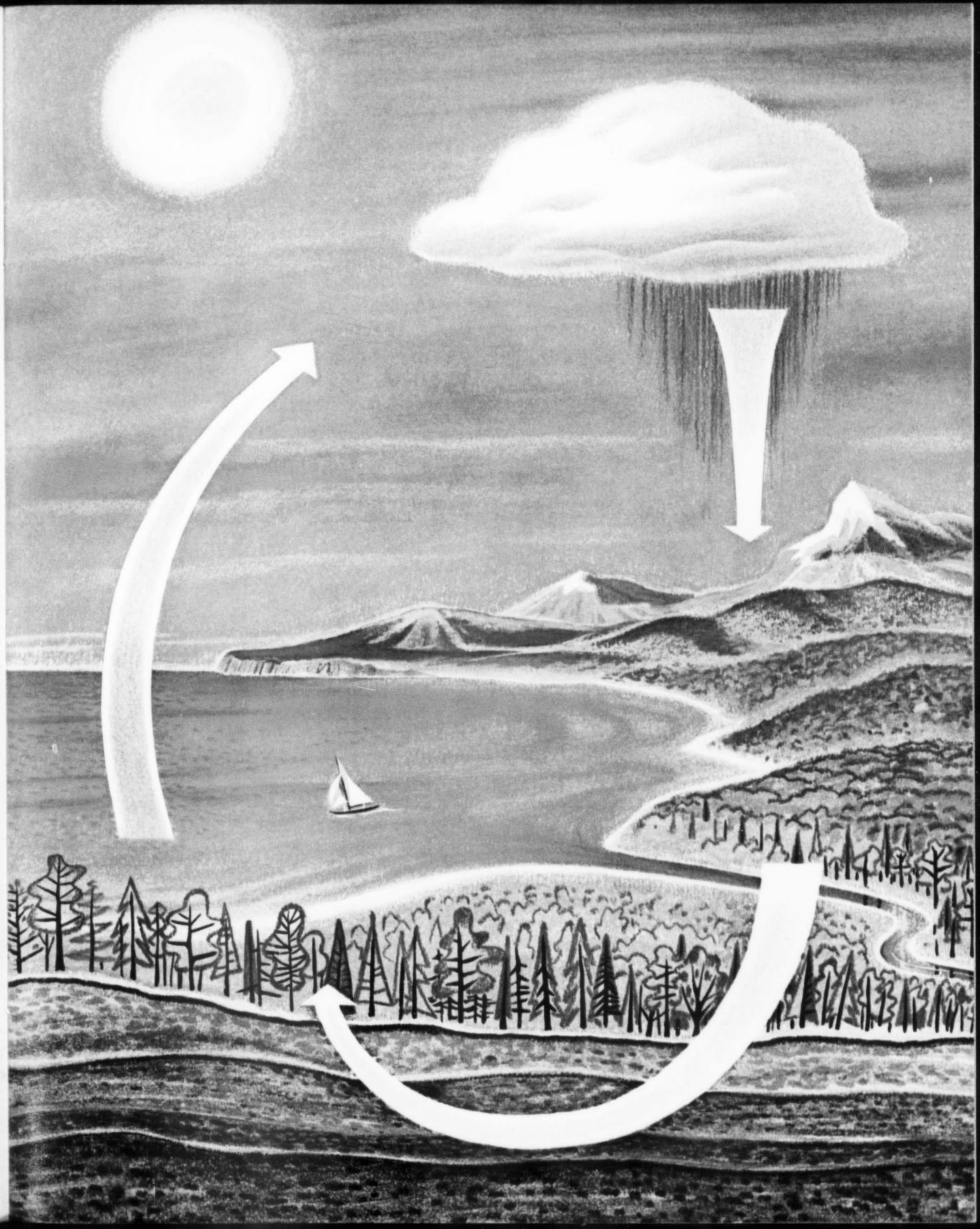


## AN INSTANT WATER CYCLE

With a teakettle of boiling water and a long-handled pan containing ice cubes you can make a hydrological cycle. The heat inside the kettle evaporates the water. From the spout of the kettle come clouds of steam. The vapor is so hot that as soon as it hits the air it cools and *condenses* into clouds. If you hold the pan of ice cubes in these clouds, water droplets will soon form and join with others into larger drops. When these get big enough, they will fall off. And then you have—as the weatherman says—*precipitation* (pre-SIP-i-TAY-shun) in the form of rain.

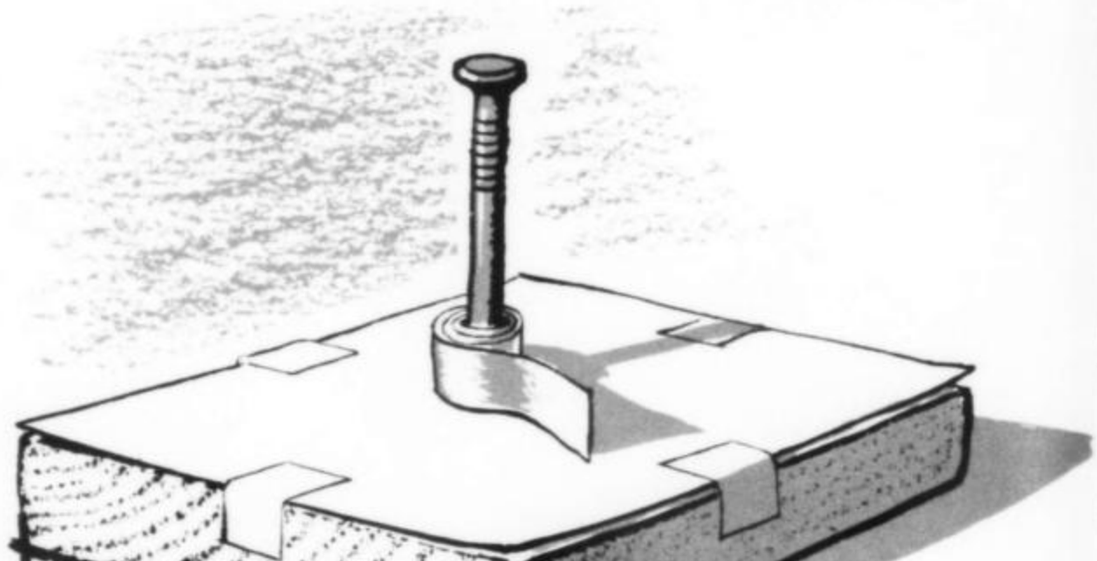
## WATER IN THE AIR

*Humid* (HEW-mid) is another word for damp. When people talk about *humidity* they mean the amount of dampness—or water vapor—in the air. To measure this, weathermen use a *hygrometer* (high-GROM-e-ter). To make a simple one, you will need:

A small block of wood
A square of thin white cardboard
A large nail
A ¼"-wide strip cut from the full length of a chewing-gum wrapper that has metal foil on one side and paper on the other.

Cut the cardboard to fit the top of the block and tape it in place. Drive the nail a little way into the center of the block. Tape one end of the strip to the nail just above the cardboard. Be sure the paper is against the nail and the foil side is out. Wrap the strip around the nail, all but the last inch. On a clear, dry day the strip will be curled up tightly. The damper the air, the farther the strip will uncurl. You can test this by breathing on the strip. The moisture in your breath should make it uncurl a little. After you have checked where the end of the strip points in dry and wet weather, you can mark the cardboard accordingly. THE END

Drawings by James Reid



# Life in an Old Hollow Log

by Richard C. Davids

Pretend you are playing hide-and-seek. Where would you hide? Maybe you would hide inside a hollow log if you could squeeze in.

When you play hide-and-seek and someone finds you, you lose the game. But do you know what happens to wild creatures when they are found by an enemy? They get eaten up!

Most wildlife must play hide-and-seek every day, every hour, every minute of their lives . . . to stay alive. One of the best places for wildlife to hide is in an old hollow log. For some creatures a hollow log is home all year long.

On the following pages you can see some of the traffic that may go through a log. Of all the places in the woods, the busiest is usually around a fallen tree. Many times when a tree falls, its roots open up holes in the ground for foxes, wolves and even bears to live in.

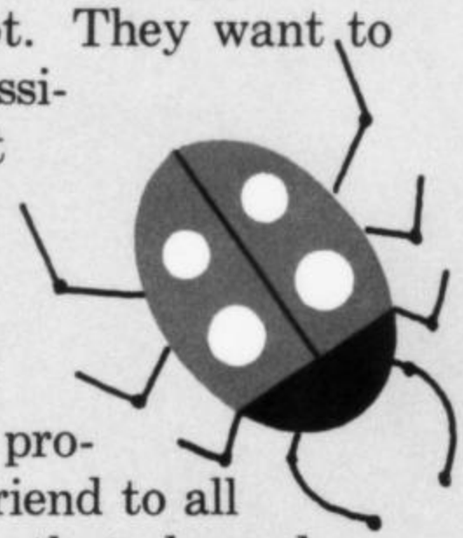
Weasels and mink find mice around old logs. Bugs and beetles live under the bark, and are food for birds such as wrens. Other insects live under the log, and are food for toads and salamanders.

Beautiful mosses and bright-colored fungi often grow on an old log. Seeds of trees begin to grow in the moist parts and lovely wildflowers live in the cool shade.

Can you think of a better friend of Nature's than an old log?

Someday when you are walking in the woods you may find a fallen tree. Stand very still and watch. You may see surprising things. The more often you return to watch, the more you are likely to see.

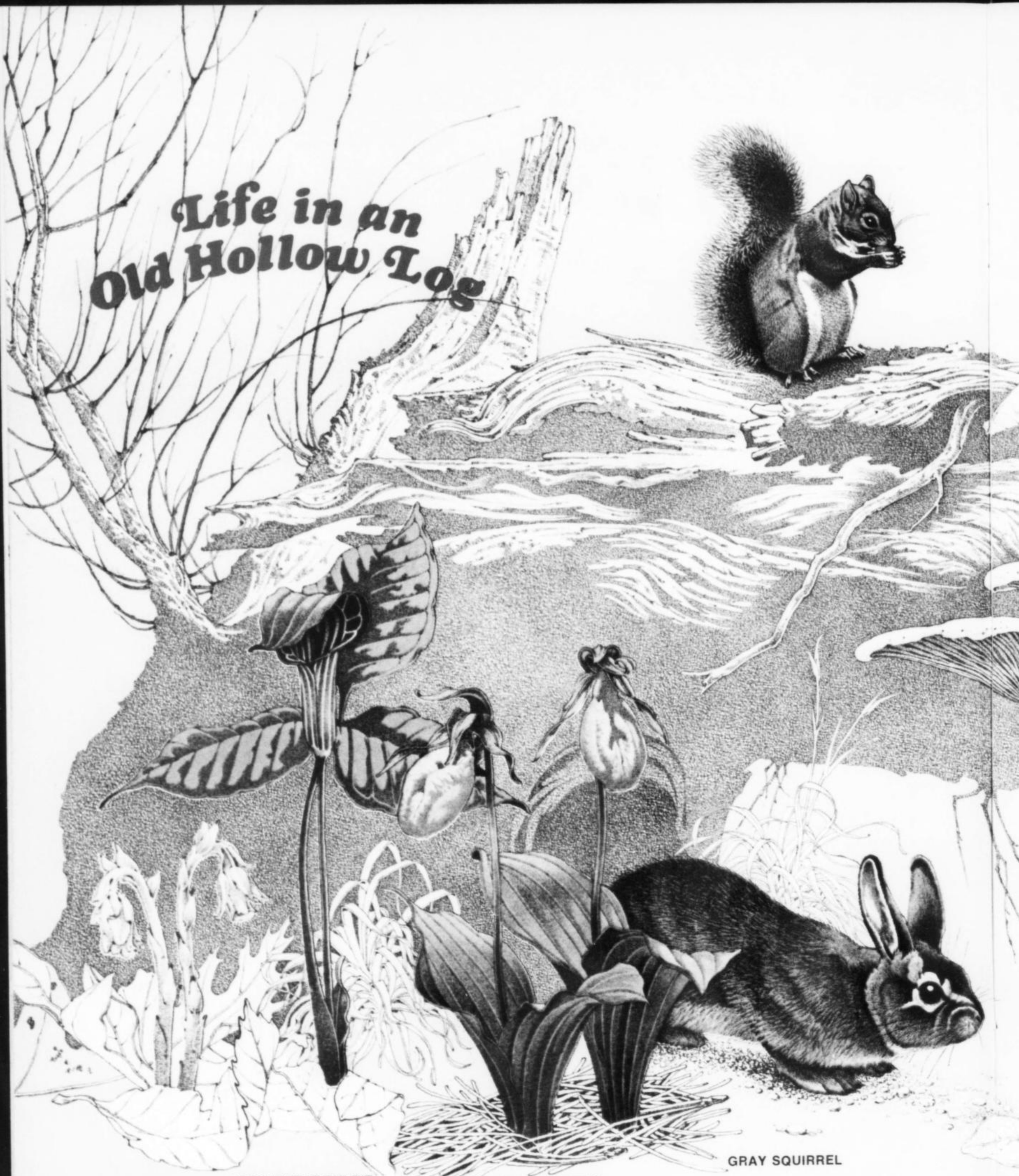
Some people think a tree is ugly when it falls and begins to rot. They want to burn it up as fast as possible. Perhaps they don't know why the woods should have old logs and that burning a log may destroy a home for wildlife. By helping to protect old logs you are a friend to all the plants and animals that depend on logs for shelter and protection.



On the next six pages you will find pictures of the creatures and plants you might see in and around old logs in the eastern part of the United States. Next fall we will have pictures of a Western log. After you have studied the next six pages see if you can think of any more plants or animals which might be found there. Write to Ranger Rick at his address on Page 34 about your additions.

*Please turn the page*

# Life in an Old Hollow Log



GRAY SQUIRREL

INDIAN PIPE

JACK-IN-THE-PULPIT

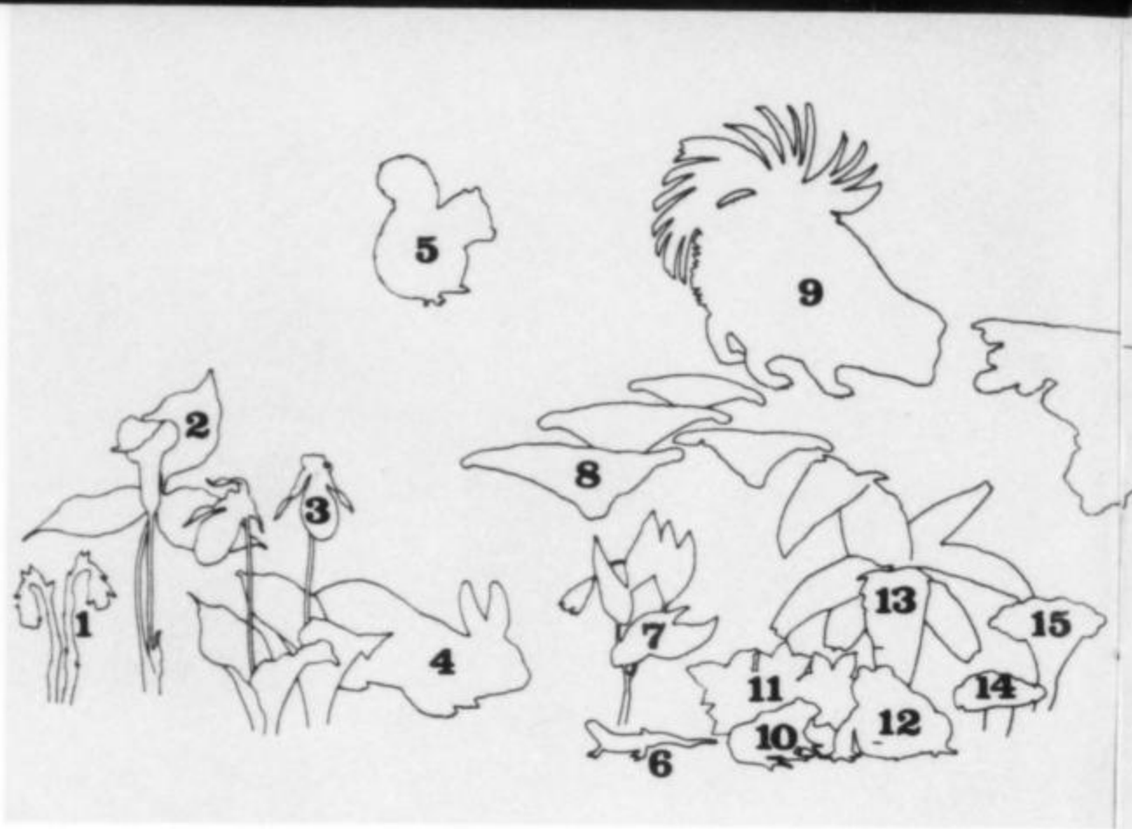
PINK LADY'S SLIPPER

RABBIT

OYSTER MUSHROOM
BELLWORT
RED EFT
SKUNK
BUNCHBERRY
LEOPARD FROG
CHRISTMAS FERN
AMERICAN TOAD
CHANTARELLE
GREENISH RUSSULA

# What's In The Log?

by Ryan B. Walden




**1** INDIAN PIPE. As summer wears on, the Indian pipe can be found growing in the decaying humus of the old log. It must get its food from the humus because it cannot make its own.

**2** JACK-IN-THE-PULPIT. The rich soil around the log is an ideal place for this plant to grow. In the fall *Jack* and the *pulpit* will be replaced by a cluster of bright red berries.

**3** PINK LADY'S SLIPPER. Also known as the "moccasin flower," this is one of the best-known and most beautiful native orchids. It flowers during the early summer.

**4** COTTONTAIL RABBIT. With his back against the old log, the brown cottontail rabbit is almost invisible. If something should startle the rabbit, it will take off like a rocket, dodging and bobbing, and soon its powder-puff tail will disappear from view.

**5** GRAY SQUIRREL. In the log the gray squirrel finds many of its favorite foods; insects, young plant sprouts and mushrooms.

**6** RED EFT. Born in a pond, the red eft will live on land for two years or more. During this time the log will be its home and will also provide a ready supply of insects and worms to eat. Then he returns to water and is known as a red-spotted newt.

**7** BELLWORT. This plant with its nodding yellow flowers grows well in the rich soil. Insects and fungi help to change the log into soil.

**8** OYSTER MUSHROOM. This can be found growing on decaying stumps and logs from late spring to fall. The brown or white caps of the oyster mushroom are very soft and are a favorite food of the gray squirrel and wood tortoise, but they are poisonous to people.

**9** SKUNK. Many of the foods that the gray squirrel eats are also enjoyed by the skunk. The log is full of ants and termites, so he uses his long toenails to help him find his dinner. Late evening and night are the best times to see him visit the log.

**10** LEOPARD FROG. In the summer the leopard frog often goes far from water to search for food. Because of this he is sometimes called the "meadow frog."

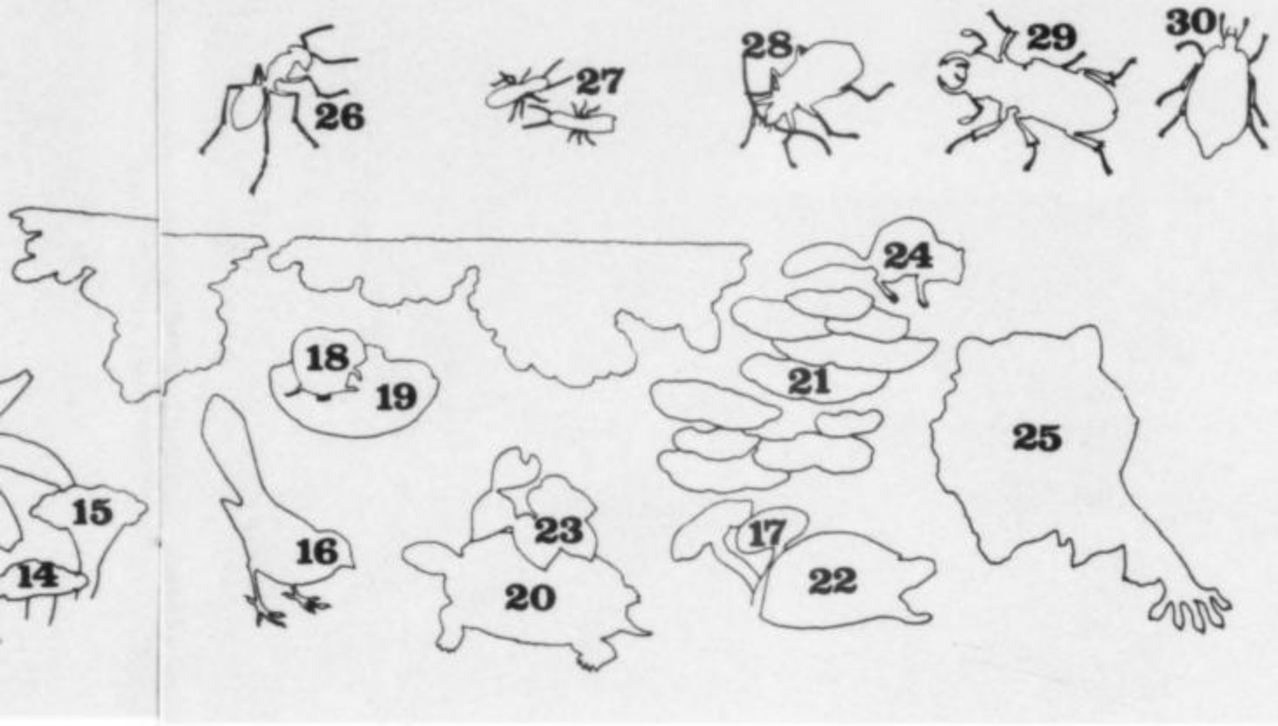
**11** BUNCHBERRY. Like its relative, the dogwood tree, the bunchberry has bright red fruits in the fall. Now, the yellow flowers look like little umbrellas.

**12** AMERICAN TOAD. In late spring the American or "hop" toad leaves the pond and returns to the log where it can find grubs and insects to eat. During the day this warty-skinned amphibian hides under the log.

**13** CHRISTMAS FERN. The leaflets of the Christmas fern look like small green stockings lined up in rows. Even during the cold weather at Christmas, this fern stays green.

**14** GREENISH RUSSULA. The flaky greenish patches which are seen on the greenish russula are produced by the cracking of its skin. Like all fungi, it cannot make its own food, so it lives on the decay of the old log.

**15** CHANTARELLE. This mushroom has a trumpet shape which gives the chantarelle its common name of "horn of plenty." It helps to make




the soil rich and may be eaten by people and animals.

**16** Towhee. It is easy to see and hear the towhee as he rustles the dead leaves near the log. When he is looking for food, he uses both feet to scratch the ground and makes as much noise as an animal many times his size.

**17** Lenzites Betulina. The colored bands on the upper surface of the *lenzites betulina* make it a very pretty fungus. It is helpful to man because it causes the dead log to decay and someday return to soil.

**18** Meadow Mouse. This creature is said to be the most important mammal in the woods. The meadow mouse earns this title the hard way. All life depends upon plants for food and the mouse is an example of how plants are changed into flesh: the mouse eats grass around-the-clock, then he gets eaten by other animals.

**19** Beefsteak Fungi. Young caps of this fungus are blood-red and give this plant its name. From early summer until fall, people and animals search for it growing on stumps and logs because it is very good to eat.

**20** Wood Tortoise. As much at home on land as in the water, the wood tortoise spends the summer months in the meadows and woodlands. His main diet is earthworms and slugs found near the decaying log, but he also enjoys mushrooms.

**21** Vermilion Mushroom. This mushroom grows on the log. As if touched by magic, it glows at night with a strange light.

**22** Box Tortoise. The woodlands are the real home of the box tortoise. He may be found near a stream when the weather is very hot, but he usually prefers the cool woods and hillsides. In the loose soil under the log is where he will sleep during the cold winter.

**23** Wood Violet. The April sun wakes the wood violets from their winter sleep. Because they grow so quickly in the rich woodland soil, they are often called "johnny-jump-ups."

**24** Chipmunk. Many kinds of food can be found near the log for the chipmunk to eat, and it also provides him with a high platform to use as a feeding station. His scientific name tells us more about him because it means "striped storer."

**25** Raccoon. The hollow log is just the kind of home Mrs. Raccoon looks for after a long night of adventure and food hunting. She may live in it all winter long and raise her babies there.

**26** Black Carpenter Ant. This ant chews fallen trees, branches and leaves to get his food and, in doing so, returns the nutrients from the plants to the soil. This is important to all the life in the forest.

**27** Termites. Most termites live in damp, rotting wood. They also *eat* the wood but cannot digest it. Tiny animals called "protozoa" live inside the termites' bodies and digest the wood for the termites.

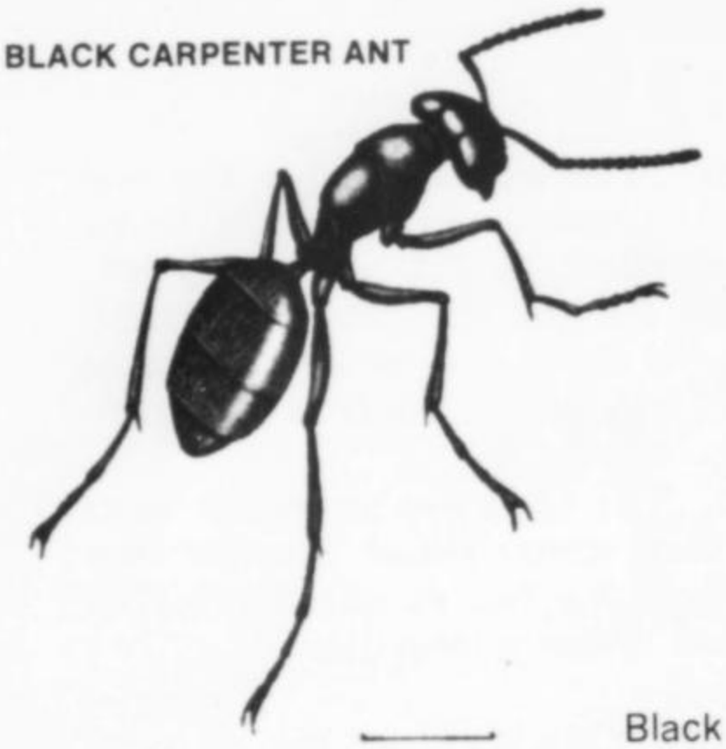
**28** Fiery Searcher. Of all the ground beetles in the forest, the fiery searcher is one of the largest and most colorful. As night approaches, this predator begins to roam in search of insects.

**29** Stag Beetle. With mouth parts that look like the antlers of a deer, the stag beetle searches in the decaying log for its juices.

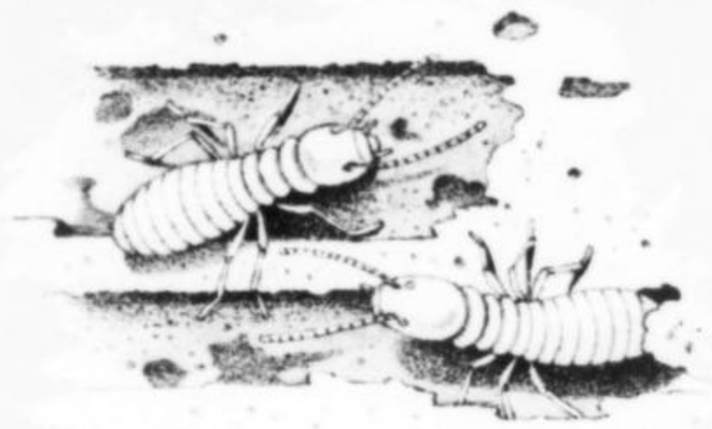
**30** Carrion Beetle. This is one of the strongest animals in the world. It can move a dead animal many times its size to another place for burial. The female then lays her eggs on the dead animal so that when the young beetles hatch they will have food.

THE END

BLACK CARPENTER ANT



TERMITES



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MEADOW MOUSE

BEEFSTEAK FUNGI

WOOD VIOLET

TOWHEE

WOOD TORTOISE

FIERY SEARCHER

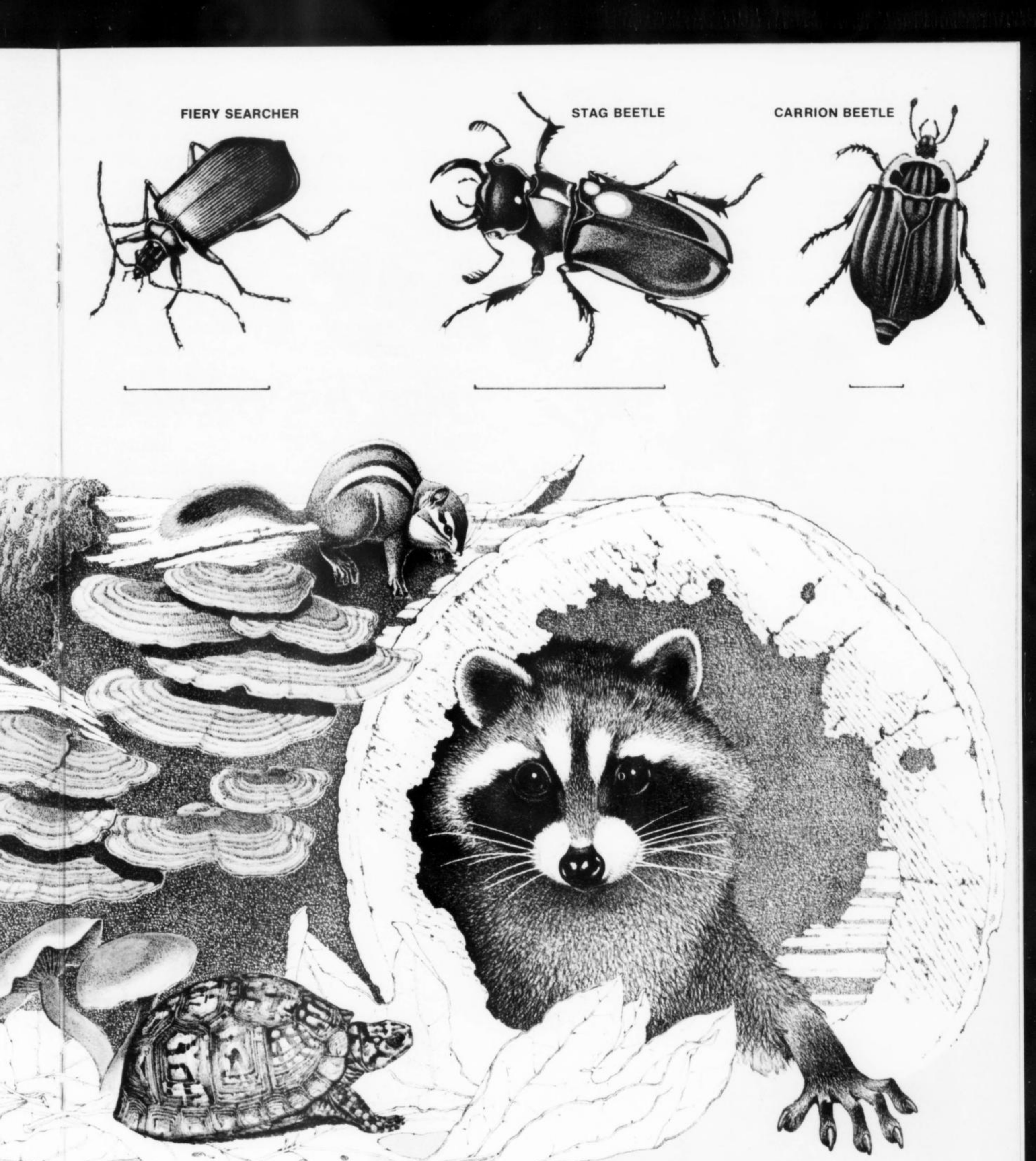


STAG BEETLE



CARRION BEETLE





VERMILION MUSHROOM
LENZITES BETULINA

BOX TORTOISE

CHIPMUNK

RACCOON

Paintings by Rudolph Freund

ADVENTURE 4
The Mystery of the Buffalo

# Ranger Rick And His Friends

by J. A. Brownridge

It had been raining for several days and the younger citizens of Deep Green Wood were restless. Some were getting into mischief and their parents were getting cross.

"Rick," snapped Zelda Possum, "can't you think of something to keep these rascals busy?"

"I'll tell them a story," said Rick. "Send them over to Ranger Headquarters."

With squeals and growls and yelps of pleasure the children of the woods scampered down the trail to the old cave which was now Ranger Headquarters.

Cubby, Jr. rumbled along like an old freight train as fast as his big, clumsy paws would carry him. But he forgot the trail was wet and slippery. He tried desperately to stop before he reached the door. Back on his hind feet he went, clawing at the muddy ground, but it was no use trying to stop.

Wham!—he hit the door full tilt. The ground shook, the door groaned, the other animals laughed with glee.

"You sure made your mark on headquarters this time, Junior," chuckled Oliver, Jr.

Rick came out to see what all the noise was and hurried the youngsters inside.

"The story I'm going to tell you today," he said, "was told to me by my great-grandfather, who heard it from his great-grandfather.

"It's about pioneers and Indians of the old West. But mostly, it is about the

buffalo. I know the story so well I can tell it in the very words my great-grandfather used.

"My name is Roger Raccoon. My four brothers and sisters and I were born in an old hollow tree near a river. Our mother took very good care of us and we grew bigger and stronger every day.

"One morning while our mother was out looking for food, we heard a strange noise. We peeked out of our den and saw a long line of covered wagons being pulled by huge, strong oxen. I didn't know it then, but later I found that those were people who were moving westward to find new homes.

"I leaned way out to get a better look. Suddenly I lost my balance and fell to the ground. The breath was knocked out of me and I couldn't move. A big dog from the wagon train dashed over barking fiercely. I thought my end had come for sure. Then a nice little girl ran up and chased the dog away. She carried me to her family's wagon.

"Many people don't realize that they shouldn't touch wild-animal babies. If the little girl had left me there, my mother would have returned and helped me.

"The people made a cage for me and took me with them. The farther west we traveled, the more I heard them talking about danger from Indian attacks.

"One afternoon we paused on a hillside and looked out upon a vast plain covered with tall, waving grass. Moving across the plain was a herd of buffalo stretching as far as the eye could see. These fine animals meant life to many of the Indians because buffalo meat was their main food. The hides made warm clothing and windproof tepees. The bones made needles and the sinews made strong thread for sewing.

"Also, just starting across the plain was

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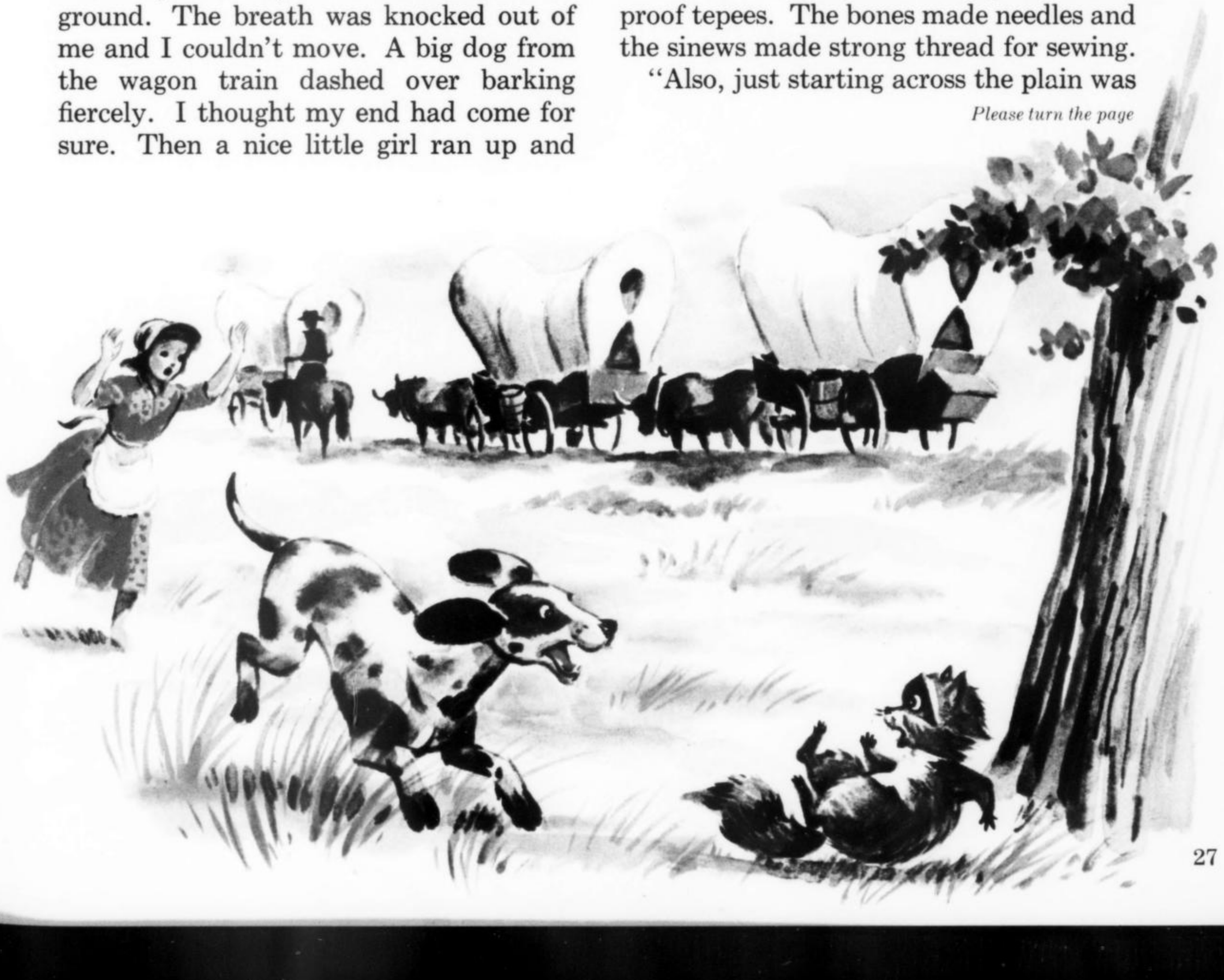


a narrow black ribbon that would soon help to destroy these wonderful buffalo herds. I didn't know it then, but this was the first railroad. Many men were working to lay the tracks from coast to coast. As the railroad moved farther into the Indians' country, they fought to protect their homes and hunting grounds.

"Suddenly a group of horsemen swept by us riding toward the buffalo. As they caught up with the frightened herd, they began to shoot them. Soon, dead buffalo were scattered all over the prairie.

"These were hunters who had been hired to get meat to feed the many men building the railroad. A string of wagons followed them to pick up the dead animals.

"On across the prairie we traveled. Every night when we stopped, the wagons formed a circle for protection against a possible Indian attack.

"Then one day, we saw more dead buffalo lying on the prairie, but this time no one was gathering the meat. This seemed like a terrible waste. When a company of soldiers rode by, the people in our wagon train asked about the buffalo. The officer in charge told us that the Indians could not keep fighting the white men if their source of food, clothing and shelter was destroyed. These buffalo had been killed just to keep the Indians from getting them. Many, many thousands of them were slaughtered for no reason other than this.

"On we pressed and then one day a fierce Indian war party rode down out of the hills. Our leader shouted orders and quickly the drivers pulled our wagons into a circle. My cage was on the inside of the circle so I had some protection. The men fired their guns from under the wagons. The women were beside them to reload the guns.

"The Indians were shooting with stolen guns as well as with bows and arrows. Bullets whizzed by my cage. Rifle shots from the wagons answered them and the noise was terrifying.

"So fierce was the shooting from the wagon train that the Indians drew back. We knew they would attack again, so the men used this time to bandage wounds and build better shelters under the wagons.



Pictures by Lorin Thompson

"It was almost dark when the next attack came. This time the Indians used flaming arrows. One of the arrows landed near my cage and it began to blaze fiercely. The fire came closer and closer to me. I clawed at the cage but could not break the bars. My fur was beginning to singe. Suddenly a flying bullet hit the rope holding my cage, and it crashed to the ground. The cage door popped open and away I scampered. My fur was still smoking from the fire. Up into the hills I ran until I found a nice hollow tree. There I hid until all the noise stopped.

"The Indians had finally given up and ridden back into the hills. The people lingered for a few days repairing their damaged wagons. The little girl who had picked me up was sad when she saw my empty cage. But I found other raccoons in the woods and made a home of my own.

"I watched more and more people moving westward. Many settled on the prairies. The buffalo grass was plowed under and was replaced by crops. Fences were built and domestic cattle moved in. Our great proud herds of buffalo had no place to go. They couldn't migrate because of the fences. Their food was gone and they had been hunted and killed by professional killers. Soon there was only a handful left from the millions we used to have."

"Gee, Rick," said Davey Deer, Jr. "What's happened to the buffalo today?"

"Well," replied Rick, "poor management and thoughtless people destroyed them almost completely. But there were a few wise men who saved small buffalo herds. We can see them today in some National Parks and Refuges."

"I'm glad people are smarter than they used to be," said Davey, Jr.

"I wish you were entirely right," smiled Rick. "But today we still have many people who do not care about wildlife and do not know the good that we animals do, each in our own way." THE END

*Dear Rangers: Each kind of animal has its own special place in nature. No other kind can take its place. We need a lot of help from boys and girls and their parents. The more you learn about the part each animal plays in our world, the more you will want to help keep each kind alive.*

RANGER RICK

# THE BIRDS WHO F

by Dr. Paul H. Fluck

Picture by Hal H. Harrison

# PLANT OUR FORESTS

What do you suppose I saw in Indiana one time? A tree growing out of the top of the Courthouse tower! I rubbed my eyes and looked again. Yes, it was a real tree. Who could have planted it there, I wondered. Then I heard the voice of a bluejay and I knew.

Since then I have seen many trees growing on buildings. One was growing in the crack of a solid rock wall. I've even found some growing in the rain gutter on my own roof.

Bluejays plant them, just as they plant millions of trees in every part of eastern North America. Where bluejays are not found, other jays do the planting. These are the Canada jays in the North, piñon jays in the Southwest and stellar's jays in the Western mountains.

Indians used to listen to the bluejays because jays were their warning sirens, their watchdogs. If a bear or a panther or a rattlesnake was nearby, the bluejays were certain to spot it. Indians learned the bluejay language.

The "pump-handle call," which is a loud, squawking sound, is their battle cry. If you should hear it, look out! Bluejays often "dive-bomb" people who are too close to their nests or to their babies. A jay weighs only a few ounces, so he can't possibly hurt you, but I have seen big strong men running when bluejays started to chase them.

Most bluejays know how to make the call of the red-shouldered hawk. By making this sound the jay probably believes he can scare away crows and other jays, and possibly even squirrels when they come into his feeding or nesting area.

Listen to the calls of birds whenever you can. You can have a lot of fun in the woods if you know what is going on around you. And by following the jays you can often see other interesting birds and animals.

One day I asked a big crowd of more than 300 children to vote for their favorite bird and, of course, the bluejay won.

Nuts that fall to the ground by themselves usually don't get covered deeply enough to grow. Squirrels plant many hickory nuts and walnuts. Men plant some pine forests, others grow from seeds that fall naturally from nearby trees.

One day when I was visiting a sick boy who lives on a farm, his mother told me about a strange happening in their barn. Every day she would find a small pile of acorns. She was mystified until one day

*Please turn the page*

*The steller's jay lives year-round in the pine forests of western North America. It is a large bird, growing to about twelve inches in length. These jays nest in late April or early May. Usually four pale blue-green eggs, spotted with shades of brown or olive, are laid in the nest.*

Pictures by Joe Van Wormer, Russ Kinne—Photo Researchers, Inc.

she saw an acorn come tumbling through a hole in the wall! A bluejay was laying up his winter supply of nuts.

Bluejays are workers. They can't seem to quit so long as there are empty holes to be filled.

Watch a bluejay at your feeder when he picks up sunflower seeds or peanuts. Does he eat the peanut? No! He holds it in his mouth and grabs another, and another. Then he flies away with them all. One day I watched a bluejay pick up fourteen small Spanish peanuts!

You can follow the jay and watch what he does. He may hide the peanuts in a rotting log or a stone fence, or you may see him pushing them into a soft spot in the ground. Of course, the peanuts have been roasted and won't grow. But jays do the same thing with other seeds that do grow. Sometimes jays plant new forests far from where they found the seeds.

A leading expert on birds was the late Dr. Edward Howard Forbush. He said, "If civilized man should disappear, jays could replant all the cleared land in eastern North America." Where cities like New York and Washington are now, forests would grow again. THE END

*The short-tailed, steel-blue piñon jay has no crest as do the blue and steller's jays.*

# THE SASSAFRAS TREE

by William Y. Weisel

Drawing by John Quinn

"*Sassafras albidum*," better known as just plain "sassafras," is a native American tree. It grows in the eastern United States from Maine to Michigan, and as far south as eastern Texas and Florida.

In the colder climates it usually grows no bigger than a shrub, but in the warmer parts of the country it can grow as tall as fifty to eighty feet. So remember, when looking for sassafras, you may find it growing at nearly any height. It prefers a warm, sunny spot and soil which is sandy or rocky but rather fertile.

And here is a most interesting fact: Three different leaves grow on the sassafras tree, often on the very same twig. You will find some that are oval-shaped, some shaped like a mitten with a thumb, and others with three lobes that resemble three "fingers." All of the leaves have smooth edges and grow to a length of from three to six inches.

In the spring and summer the leaves are a smooth, dull green on top. Underneath they are a paler green and are soft and velvety to the touch. Autumn turns the sassafras leaves to a delicate yellow-orange, or sometimes to a flaming red.

Small clusters of yellow flowers grow on the sassafras tree in spring, giving way to dark-blue berries on bright-red stems in late summer. Wild birds, wild turkeys and the black bear enjoy eating the berries, and rabbits and the whitetail deer feed on the tender, spicy sassafras twigs.

People, too, have found the sassafras tree useful. A delicious tea can be brewed from the bark of the dried roots. Scrape the bark from the root and boil the bark in water and drink the tea hot. The American Indians and early settlers believed this tea was a cure for many sicknesses, particularly the common cold.

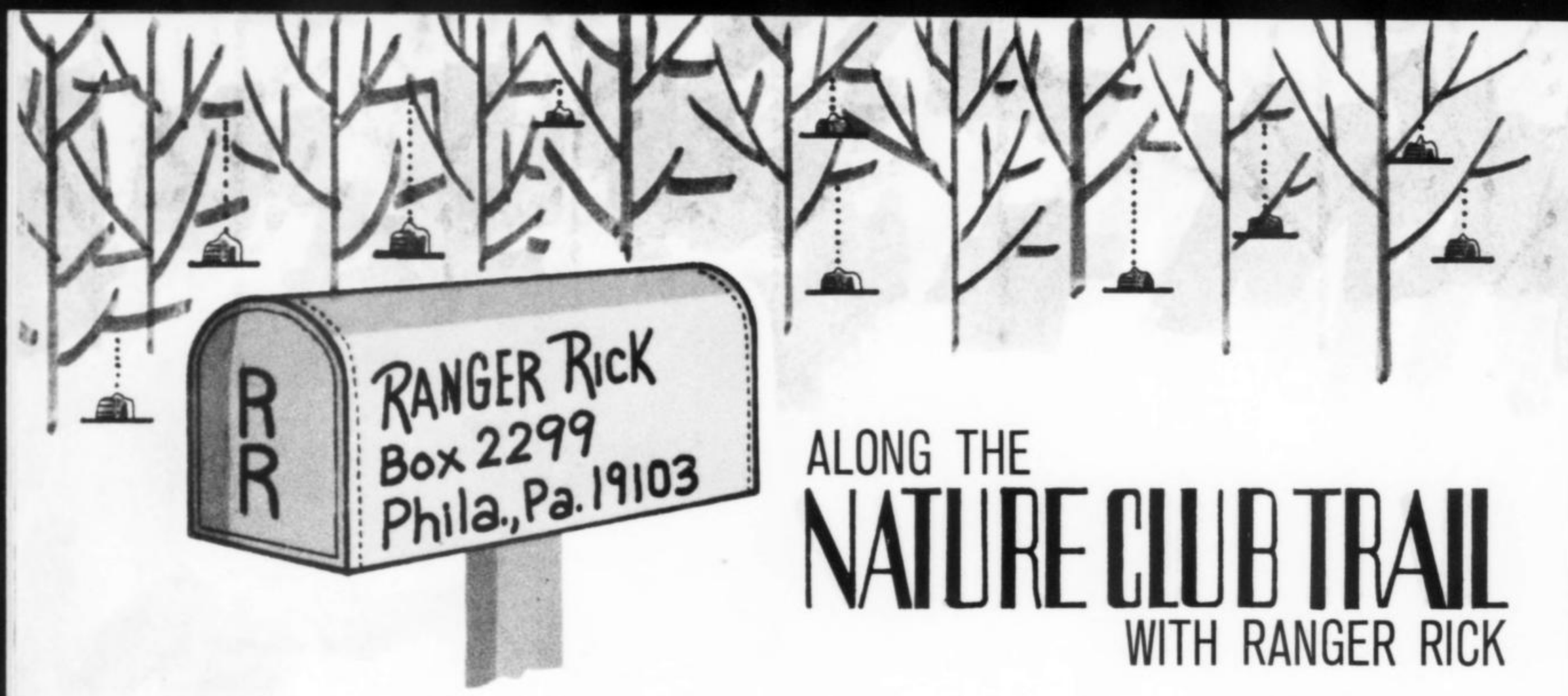
Sassafras oil, distilled from the root bark, is used to flavor candies and medicines and to make root beer.

Young sassafras leaves can be dried and powdered and used to thicken soups.

An orange dye is made from the red-brown bark of the tree. The wood was used by our colonial ancestors to make barrels, buckets, posts and even dugout canoes.

*Sassafras albidum* has earned a place in our country's heritage. Its many uses through our entire history have made it as American as the song "Yankee Doodle."

THE END




# ALONG THE NATURE CLUB TRAIL WITH RANGER RICK

Dear Rangers:

Ollie Otter, Wise Old Owl and I are wearing mile-wide smiles. We're so proud of our mail from you! What makes us extra happy is that you are sending in lots of questions. These tell us what really interests you—and that's what we need to know most of all! Here is one of them:

*Question*: If I find a baby bird and can't find its nest, what should I do with it?

—*James Caldwell, Md.*

*Answer*: First, watch the little bird for at least one hour to see if the mother comes to feed her baby. If she does, you should leave it alone. If the mother does not come, however, or if you are positive she has been killed, and the baby bird cannot fly, you may be able to save its life. Remember, though, that most birds (including robins and other songbirds) are protected by laws which say you must not chase or capture them, especially in the springtime.

The best thing to do is to place the baby bird carefully on a branch of a nearby tree, making sure that it is out of the reach of cats and dogs. If the bird can't hold onto the branch by itself, get something about the size and shape of a nest like a plastic bowl from your kitchen. Line it with soft grass, cloth or cotton, and place the bird in it.

Very young birds need food every half hour during the daytime. If the nest is jostled slightly when food is offered (as happens when the parents land on the nest) the bird may open its mouth. If not, you will have to open its mouth gently with your fingers. Food stuck on a toothpick or pinched between two toothpicks may then be put in its mouth.

Birds may be fed small pellets of dog food, sections of earthworms, soft banana, small bits of mealy apple or chopped hard-boiled egg moistened with cod-liver oil. Water or milk should never be fed with an eyedropper. Offer the bird liquids in a shallow dish *only* when it is old enough to sit on a perch.

Between feedings and at night, cover the nest with a cloth that is light enough for air to pass through, so the bird can breathe. The nest should be in a place free from drafts, at a room temperature of 70° to 80°.

A young bird should be handled gently, and only when absolutely necessary. As soon as it can fly a little, turn it loose to feed for itself. If it is hand-fed too long, it will be unable to find food for itself.

Again, thanks for your letters. Keep them coming!

RANGER RICK

## Letters To Rick—And You

*From Leslie Brown, Ky.*

I have two bird feeders right outside my window. One is filled with bird seed, the other with suet. We have two bird feeders in the back yard, also a bird bath and lots of trees.

* * *

*From Mary Lou Meimer, Age 9, Calif.*

I love animals. I have two cats and a pair of goldfish. When I meow to the cats, they answer me and come to me.

* * *

*From Thomas Gettinger, Age 7, N.Y.*

Today my friend and I made a birdhouse. I have three bird feeders so far. I like birds a lot. I have a lot of other animals, too. My friend is going to ask his parents if he can join the club, too.

When I go upstate, I sometimes see deer. I went to the Everglades and saw herons, egrets and alligators. When we were in one of the parks, we were about to go wading when we saw a medium sized alligator in the water.

* * *

*Ann Marie Hill, Age 7, Wash.*

*From Tina Cammarata, Ill.*

I had a bluejay once. It broke its wing. I took care of it until it was well. Its name was Fluff. When I found it, Dad went to get it. He put it in a basket. I fed it bread and water. One day I went to feed it and Fluff was gone. He was well! Fluff was circling around calling, "Thank you! Thank you!"

* * *

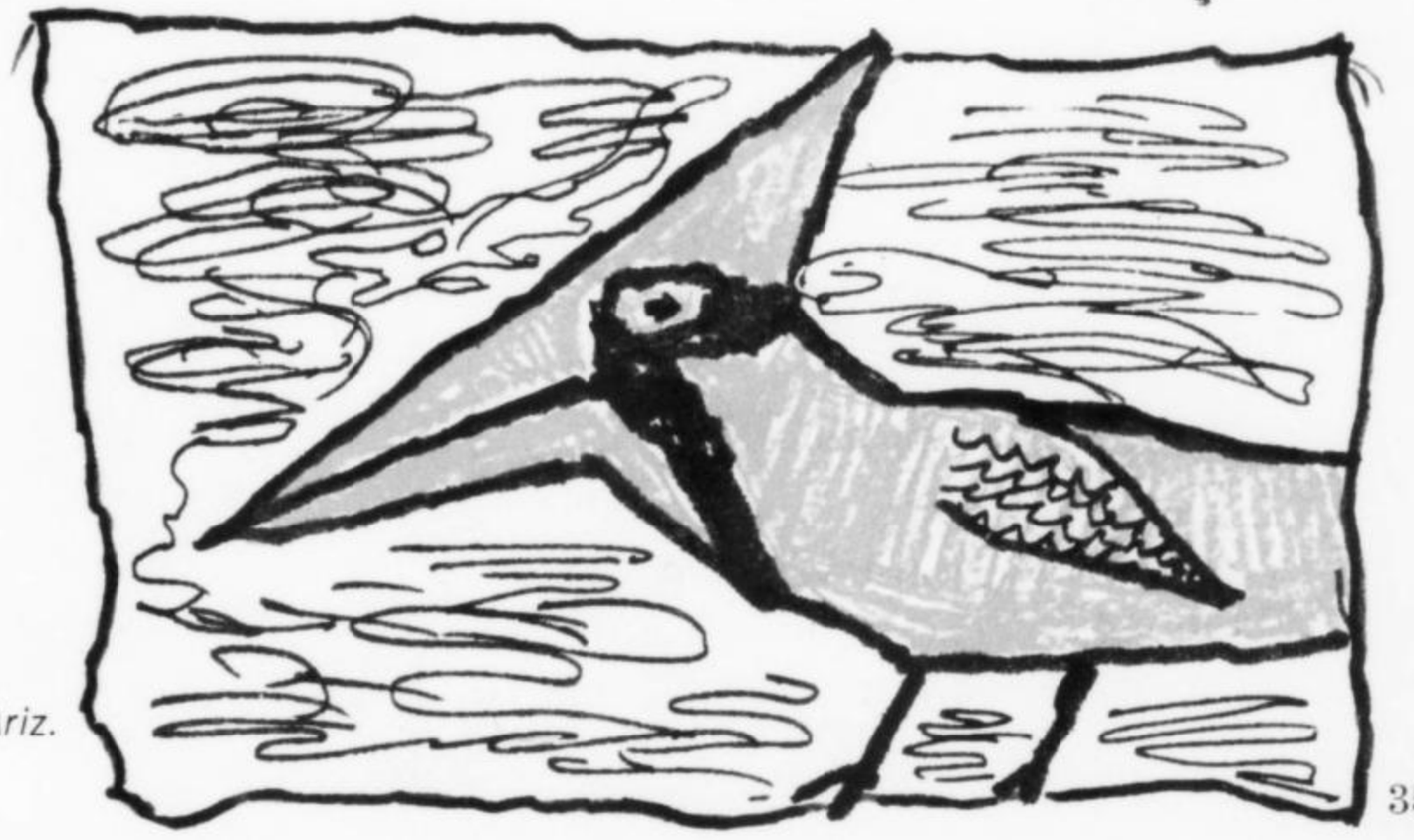
*From Adam Wertheimer, Age 6, Calif.*

I like birds they sometimes eat out of your hand and I like the way they fly.

*Please turn the page*

No need to tell the names of the birds the young artists had in mind. You can tell right away what each one is. The name of the Ranger who drew it is with each bird.

*Margaret Metz, Age 6, Wis.*



*Lisa Taylor, Age 8, Ariz.*

Four baby owls are looking at you.
Why don't you say, "How do you do?"
When you hear them go "WHOOO!"
You should know they're talking to
you-ooo.
They look at you with big bright eyes
The way they look they look like spies.
They'll find your secrets, but
they won't tell.
It shows they have learned their
manners well.

—*Brian J. Mahoney, Age 10, N.Y.*

* * *

Four baby screech owls would say to me,
"Hi, there! Do you have any rats?"

—*Leslie O. Basha, Age 8, N.M.*

*Editor's note: Owls usually eat mice, but not rats.*

* * *

Four baby screech owls watching you
Have something in their minds that's new.
And this is what they say:
"Won't you help us if you can?
Help stop fires done by man,
Or help the creatures among the trees,
The little mice and tiny bees."

—*Nina Weigend, Age 11, N.J.*

* * *

Four baby screech owls watching you!
If they could speak, they would say
"Good day! Good day"
That's what they would say.

—*Shari Marsnik, Age 7, Calif.*

Four innocent owls
Innocent as can be
That you can see!
Screech owls, screech owls
What can you do
But whoo-oo-, whoo-oo!

—*Yvonne Skeet, Age 9, N.Y.*

* * *

I don't know what the baby screech owls would say. But I would say, "Do you like Ranger Rick's Nature Magazine?" And I would say, "I like it a whole lot!"

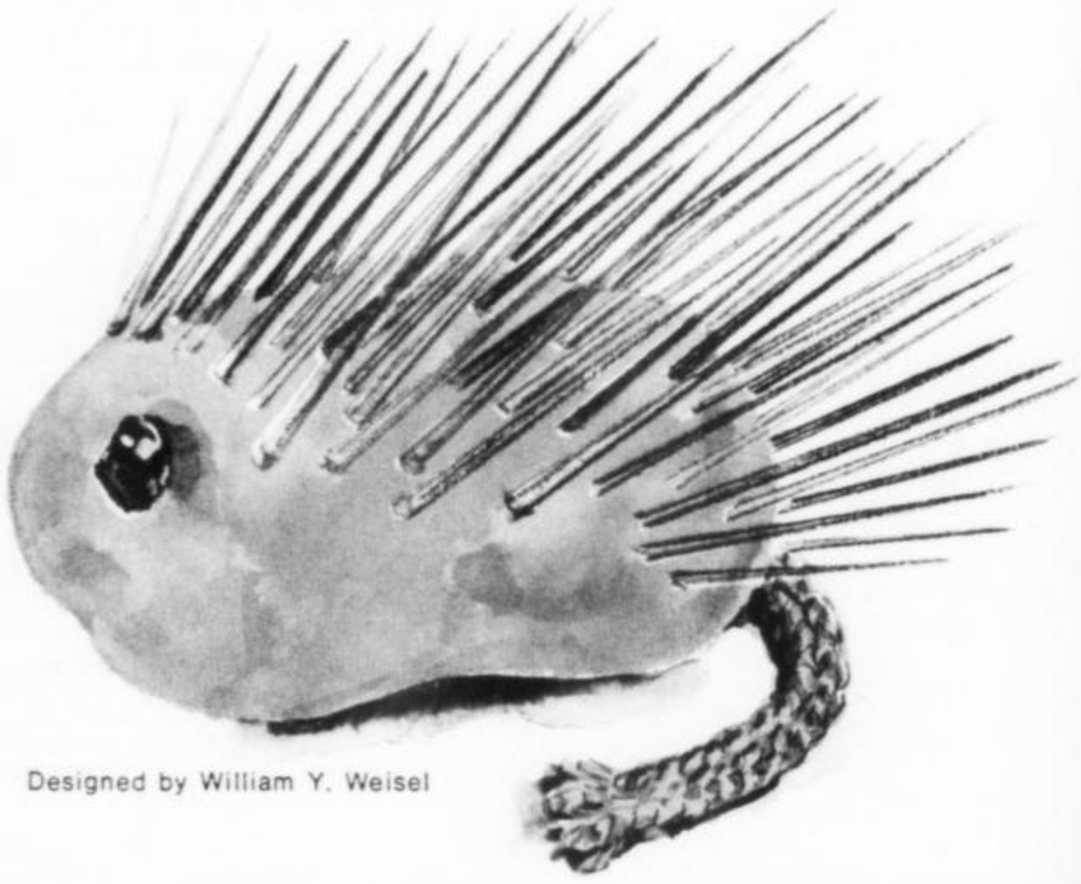
—*Evelyn Watts, Age 9, Va.*

## Vegetable Animals

With a large potato, lots of toothpicks for quills, two raisins for eyes, and a piece of clothesline (attached with a straight pin) for a tail, *you* can make a porcupine like the one in the picture below.

By adding a little more equipment (pipe cleaners, wooden picnic spoons, construction paper in different colors, and other vegetables such as carrots, cauliflower, peppers, cucumbers) you can have fun at a Nature Club meeting seeing who can make the best or funniest Vegetable Animal—real or imaginary.

If you try this, write Ranger Rick at the address on his mailbox. Tell him what you did or make a drawing, but don't send the real thing.



Designed by William Y. Weisel

# Ollie Otter's FUN and GAMES

### Riddles From Rangers

If April showers bring May flowers, what do May flowers bring? (Pilgrims. You know, on the Mayflower!)

—*Theresa Markley, Age 8, Va.*

If you were in a room with no windows or doors, how would you get out? (Stand on a chair, look in the mirror and see what you saw. Take the saw and saw the chair in half. Two halves make a whole. Crawl out the hole!) —*Tom LeCompte, Wash.*

What did one arithmetic book say to another arithmetic book? ("We've got problems!") —*Dean Sontag, Minn.*

What would you have if a bird got caught in your lawnmower? (Shredded tweet!)

—*Pamela Nerheim, Age 9, Ind.*

What four letters would frighten a thief? (O–I–C–U) —*Thomas Byrne, N.J.*

If a little bird could speak and found an orange in its nest, what do you think it would say? ("Look at the orange marmalade!") —*Roberta Hambach, Conn.*

Why is a pencil like a riddle? (It's no good without a point!)

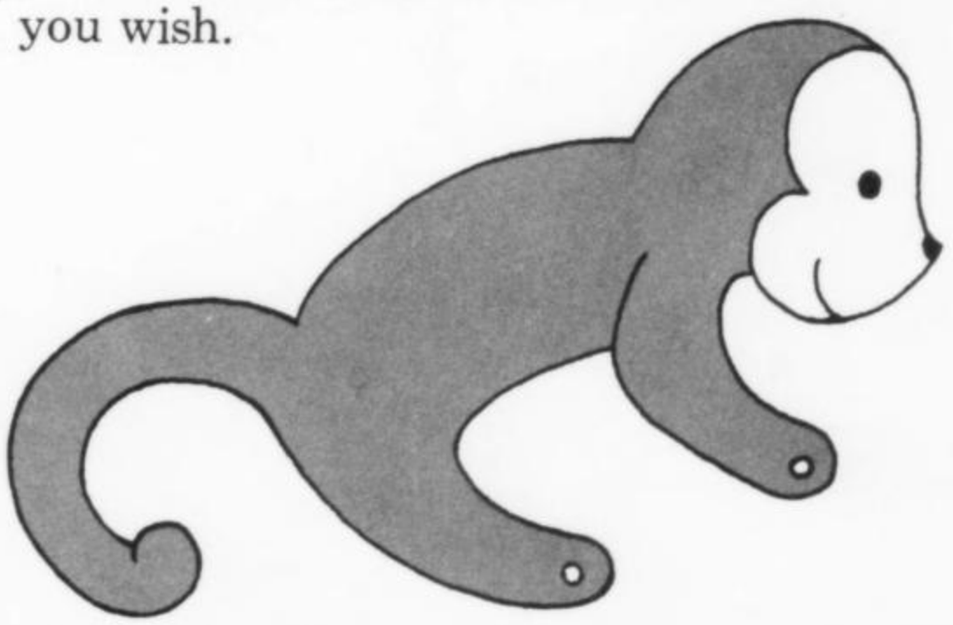
—*John Wolham, Age 8, N.Y.*

### A Climbing Monkey

Trace the monkey on a piece of construction paper or thin cardboard. Cut it out and color it. Make two tiny holes in the front and hind leg, as shown. Take a piece of heavy thread about two yards long and double it. Pull the loop end through the hind leg and then the front leg. Tie a knot in each string below the hind foot. Make the knots bigger than the hole so they won't slide through.

Now put the loop over a doorknob. By pulling one string you can make the monkey climb. When you pull the other string, he backs down.

You can draw a bigger monkey of your own after you have tried the little one on this page. Once you see how this works, you can make any other climbing animals you wish.



# a mini-garden of vegetables

by Frances M. Miner
Brooklyn Botanic Garden

Pictures by Arthur Wallower

As soon as spring comes, it is time to think about a garden. Perhaps you would like to plant a little "mini"-garden.

Begin with plants that grow easily and quickly from seeds so that you can learn the steps that are necessary. Then you can go on practicing and learning for years and years.

The quickest usable crops are radishes, leaf lettuce and scallions. You will need seeds for radishes and lettuce, but scallions are often grown from little onions called "sets." Plan with your parents where you can get these. Hardware and grocery stores usually have good seeds in the spring, but you may have to order the onion sets from a garden-supply center.

Perhaps your father will help you find a small patch of ground in a sunny place. A plot three or four feet by six feet is large enough. If plants of any kind grew well on the plot last year, it should do nicely for a spring vegetable garden. Dig the soil to a depth of six inches, taking out any large stones and pieces of old plants. Level the surface with a rake, pushing the dirt back and forth to make the surface fine and even.

It is best to plant in soil that is moist, but never, never try to work in the ground when it is very wet. Mudpies are not for gardeners.

For making straight rows find a piece of strong string that is longer than your garden plot. Tie the ends of it to two pointed sticks. Place the string where you want the first row and push the sticks into the ground at each end, stretching the string tightly between them. With another stick make a furrow, or as gardeners say, "open a drill" for the seeds. How deep? That depends on the size of the seed you are going to plant.

The seeds of lettuce are small and thin.

They may be black or white depending upon the kind of lettuce it is. Each seed contains a bit of food for its first growth. If seeds are covered with too much soil, the little plants will not have enough room for the leaves to grow up toward the sunlight. So make the drill about ¼ to ½ inch deep for lettuce, and sprinkle the seeds carefully and not too thickly under the tight string. Remember seeds will come up where they fall or are planted, so try to keep your rows straight. A tidy garden looks better! Mark the ends of the planted row with permanent sticks. Then move the string to do the next row. Nine inches or so between rows is room enough for careful walking when it is time to weed your garden.

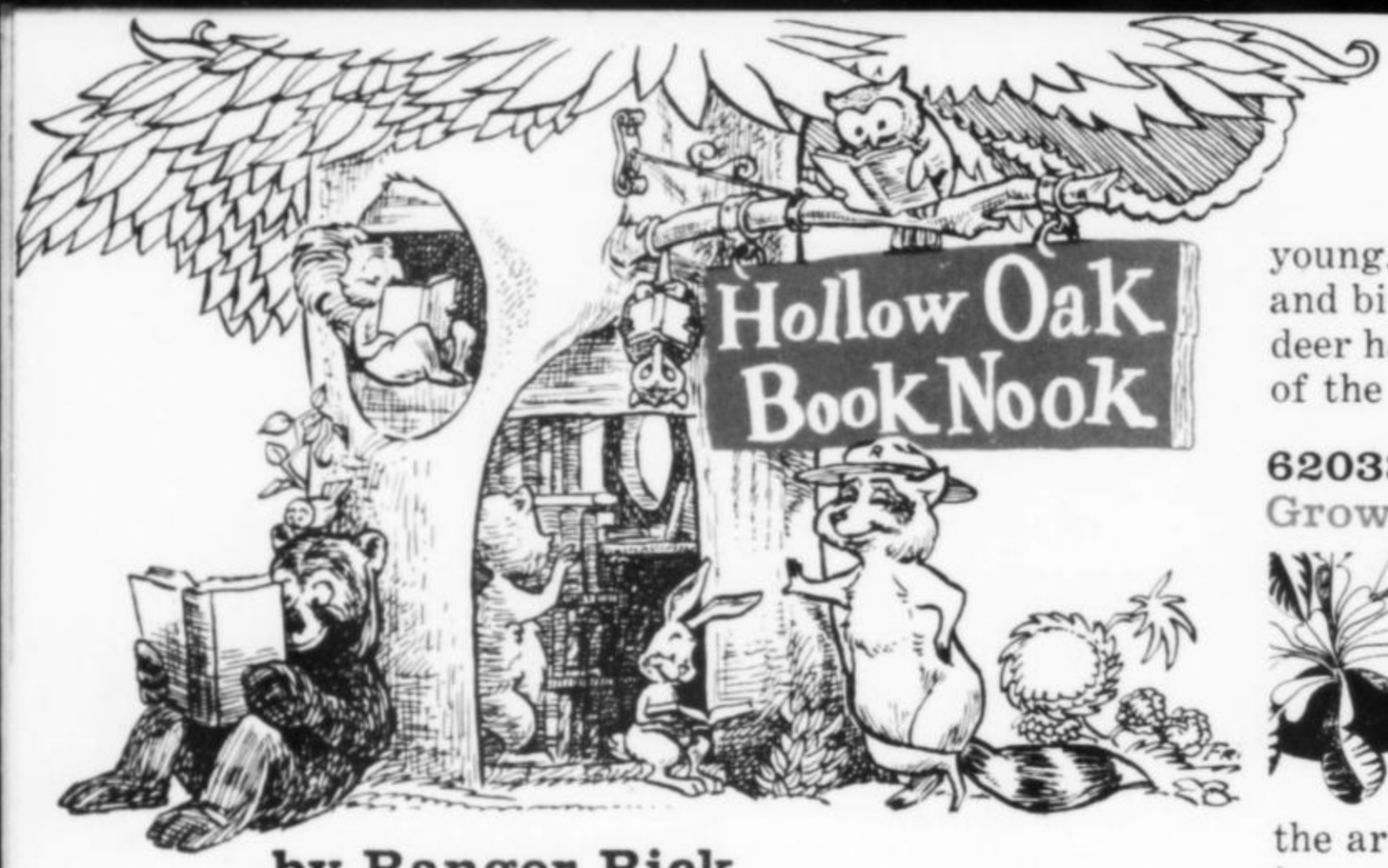
The little plants in radish seeds are stronger. They can grow up through an inch of soil cover. If there are pigeons in your neighborhood, it is wise to make the drill for radishes a full inch deep. The radish has a round, roly-poly seed which will slide out of your fingers very quickly. Space them carefully in the drill under the string. Mark the row, cover the seed and move the line to the scallion row.

These "sets" are fun to plant. They are spaced two to three inches apart in a drill deep enough to allow them to be covered completely. Be sure to plant the pointed end up!

Spring rains usually provide enough water, but if grown-up gardeners have to water their gardens, you may want to water yours too.

Look at your garden every day and watch for the seedlings to show. Plants between the marked rows are probably weeds, and the sooner you pull them out, the better. The seedlings in your rows may have to be thinned too, for plants that are too close together cannot grow well. Radishes can be thinned by harvesting the largest as soon as they are bite-sized. Lettuce is harder to do, for there may be a number of plants so close together that they look like one. Pull up one or two for a test and see how much is attached to one root. Scallions from "sets" never need thinning, for you have planted only one in a place. Be sure they are bite-sized at ground level before you pull them. They cannot be replanted!

Harvest time in this spring vegetable garden should be less than two months after planting time. THE END




## by Ranger Rick

*Dear Members:*

*Here are four more fine books which you can get from the Hollow Oak Book Nook. With Arbor Day coming up this month, our first book is an easy-to-use guide that will tell you how to tell many trees in a flash.*

### 62122—A First Book of Tree Identification

To know the trees that live and grow around us can be just as exciting as making friends with our neighbors. Here is a book that will teach you how to tell one kind of tree from another; soon you'll find that you'll be able to play the fascinating game of trying to name each tree you come across.

Matilda Rogers' *A First Book of Tree Identification* will take you on a "tree walk," with the help of the camera's lens. The tree descriptions are arranged in an order which those studying trees from Nature will find easy to remember. To help beginners, the differences between trees which look alike are made extra clear.

### 62131—The Swift Deer

In this issue, you read about the birth and early life of the whitetail deer. *The Swift Deer* by Robert M. McClung is a lovely little book that will teach you a lot more about these wonderful animals. Here are the deer of North America, from the tiny key deer of Florida to the giant moose of Alaska. Here, too, are some of their Old World relatives.

In this book you will learn how deer live, defend themselves, find mates, and raise their young. The author (former curator of mammals and birds at the Bronx Zoo) also explains what deer have meant to human beings from the time of the prehistoric cave men.

### 62033—The Indoor and Outdoor Grow-It Book

A few months ago, we told you about a book by Samm Sinclair Baker that would open to you the wonderful world of gardening. The interest that the animals in the Deep Green Wood have shown in the article "Plant Soon for Fun Later," in this issue of our magazine, shows us that it's time for us to tell you once again about *The Indoor and Outdoor Grow-It Book.*

This book will tell you how to grow all kinds of strange and marvelous plants. Did you know that there are plants that actually eat insects? You'll learn how to grow them here. Did you know that there is a way you can make grass grow on a sponge? Or that you can plant a garden so that it will grow in the form of a gigantic American flag? Mr. Baker tells you how to do all these things, and many others besides.

### 62140—All About the Insect World

Have you read the story in this issue about spiders and spider webs? If you liked that story, you'll probably be interested in reading about insects, spiders' close relatives.

The easiest way to tell an insect from such creatures as a spider is to count its legs which are always six in number. Spiders and wood ticks have eight legs.

The fabulous story of insects is told clearly and interestingly in Ferdinand C. Lane's book, *All About the Insect World.* There you'll learn about the wonderland of strange creatures that seem to come right out of a fairy tale. There is a beetle so tiny that it can crawl through the eye of a fine needle, and another beetle so large that its outspread legs would cover a good sized plate. There is the termite queen which may live 50 years and the May fly which lives only one day. There is the sexton beetle that buries dead creatures, the moth with a wingspread of 14 inches, and bees that "air-condition" their homes.

Want to hear all about them? Then read *All About the Insect World.*

Best, RANGER RICK

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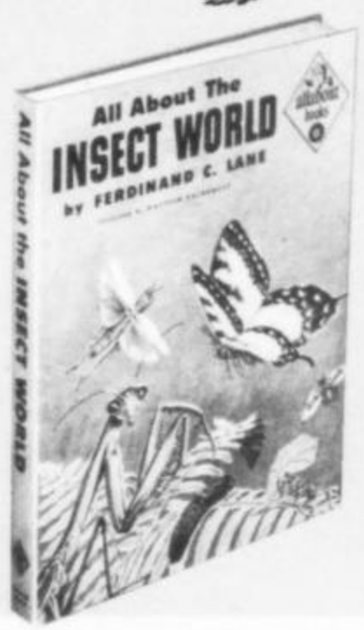
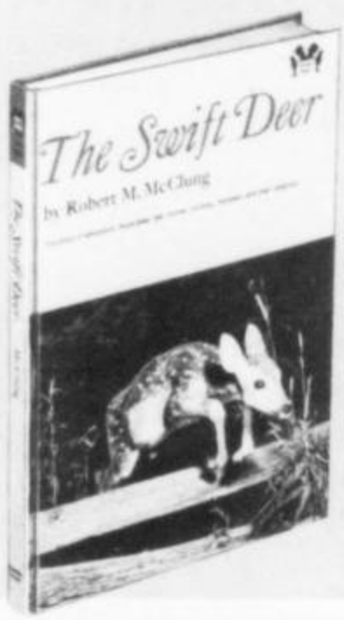
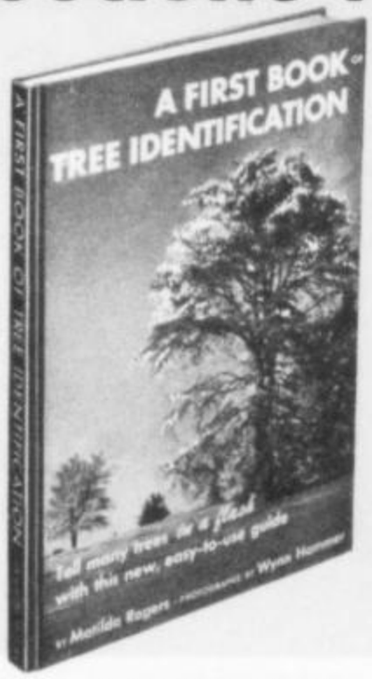


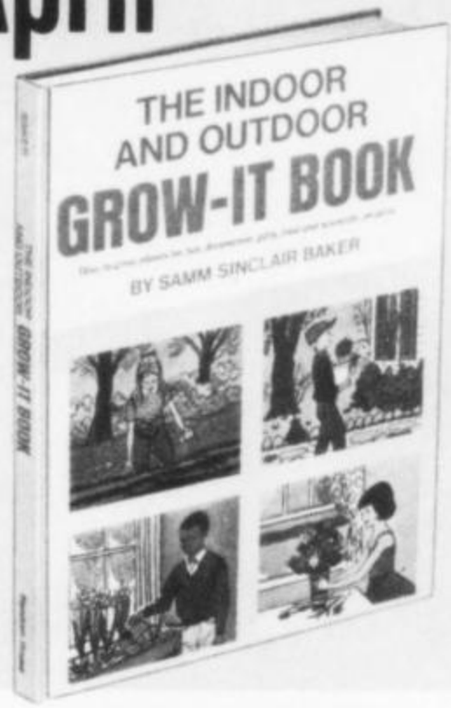

**62140—ALL ABOUT THE INSECT WORLD**
by Ferdinand C. Lane, illustrated by Matthew Kalmenoff. An Allabout Book for children 9 and up. (Pub. Ed. $1.95) **$1.60**




**62131—THE SWIFT DEER**
by Robert M. McClung, illustrated with map and photographs. A Gateway Book for children 8 and up to read all by themselves. ($1.95) **$1.60**




**62122—A FIRST BOOK OF TREE IDENTIFICATION**
by Matilda Rogers, with photographs by Wynn Hammer. For children 8 years of age and up. (Pub. Ed. $2.95) **$2.25**

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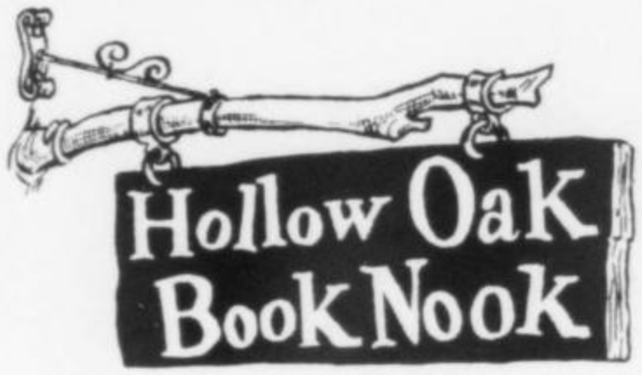


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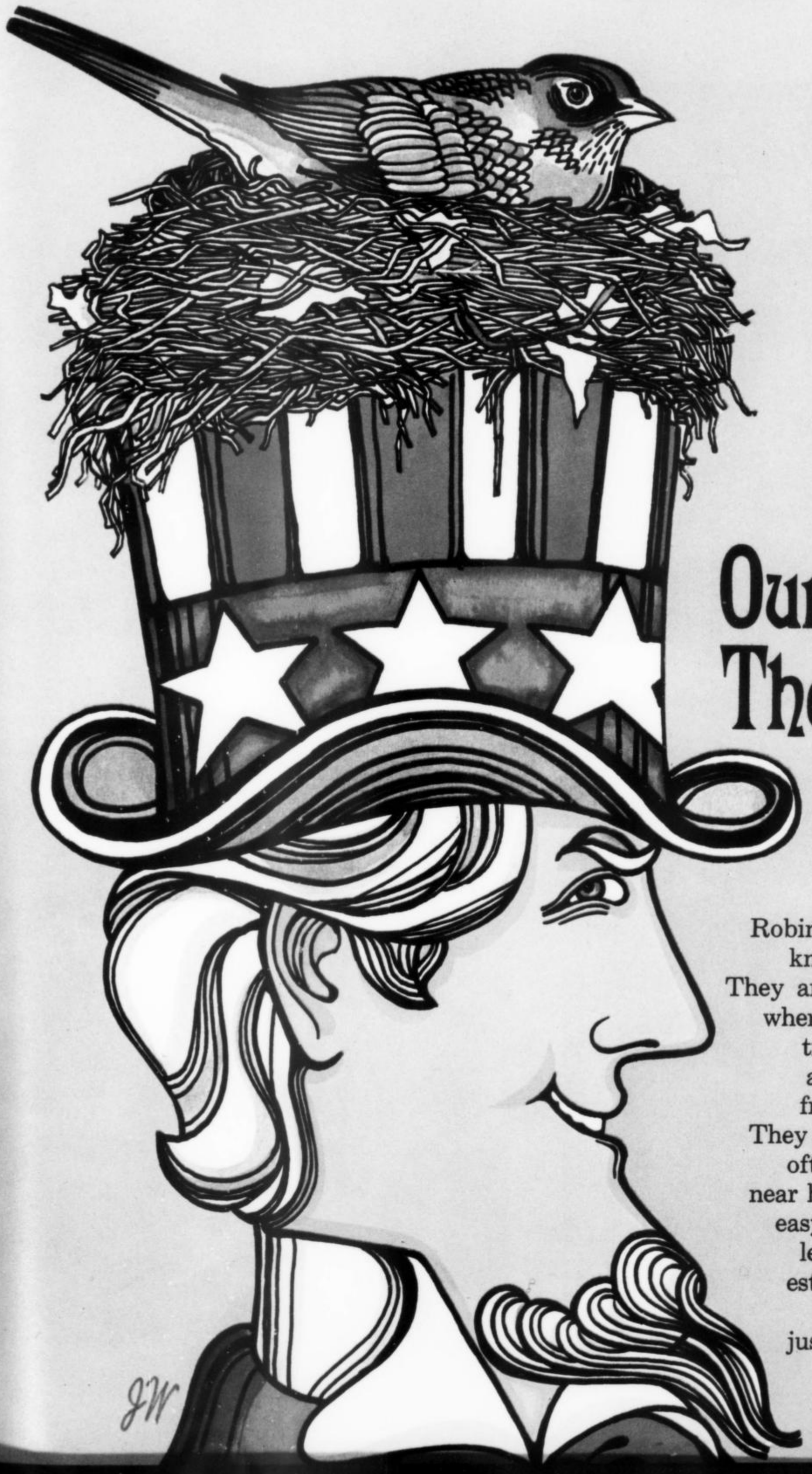
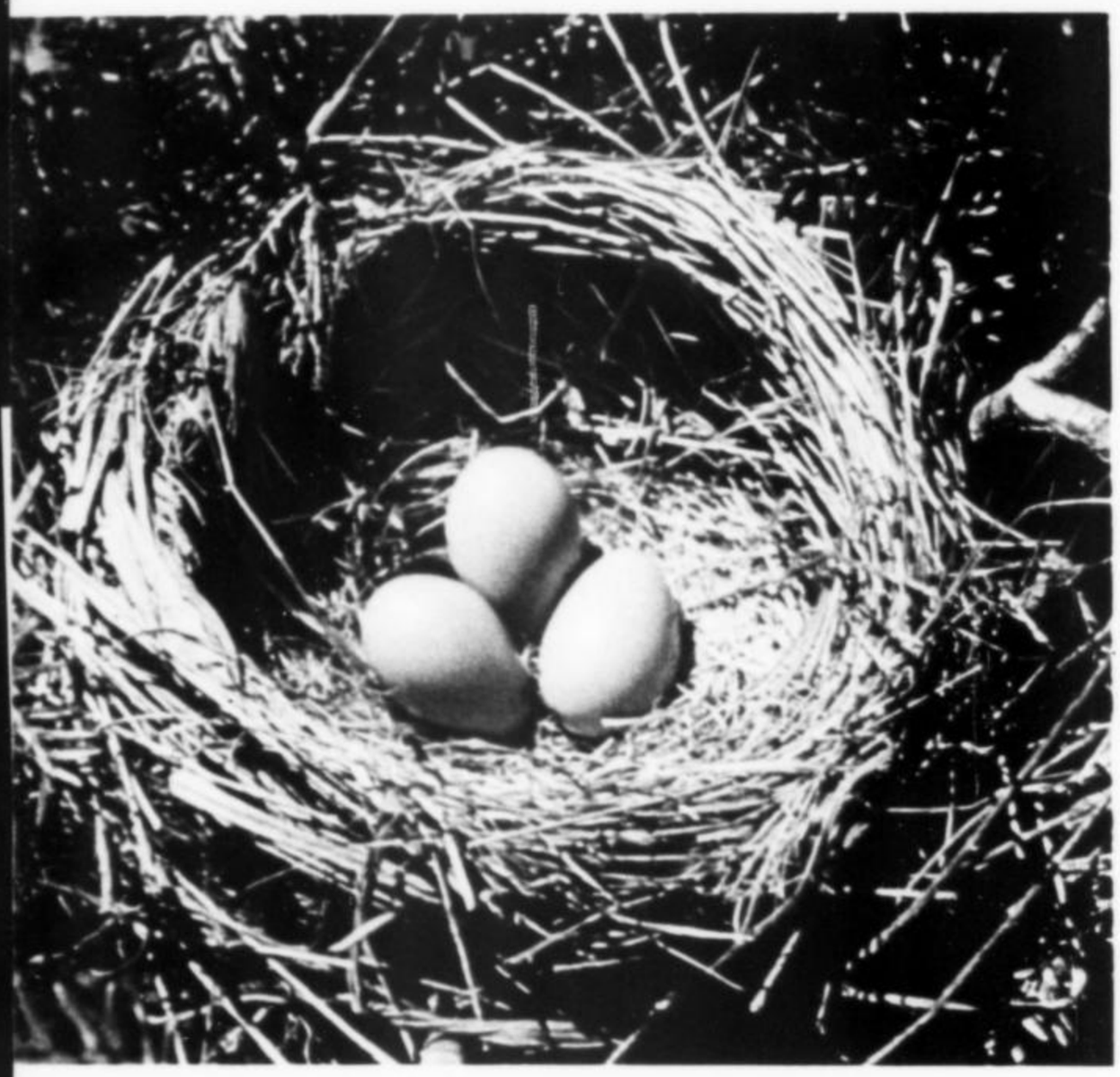


# Our Friends The Robins

Story and Pictures by
Dr. Richard B. Fischer

Robins are America's best-known, best-loved birds. They are found nearly everywhere across our big country—in western forests and in eastern orchards, from Canada to Mexico. They are friendly birds and often make their homes near humans. That makes it easy for nature lovers to learn about their interesting habits by watching the birds instead of just reading about them.

*Please turn the page*



*Mother robin lays three or four eggs. Can you see where the color "robin's egg blue" comes from?*

Have you listened to the cock robins as they sing their spring songs? People used to think it meant that they were happy. Now we know that a robin (and most other father birds!) sings because he has claimed a piece of land, and he is warning other robins to stay away. Also, he is telling the female robins that he would like one to be his wife.

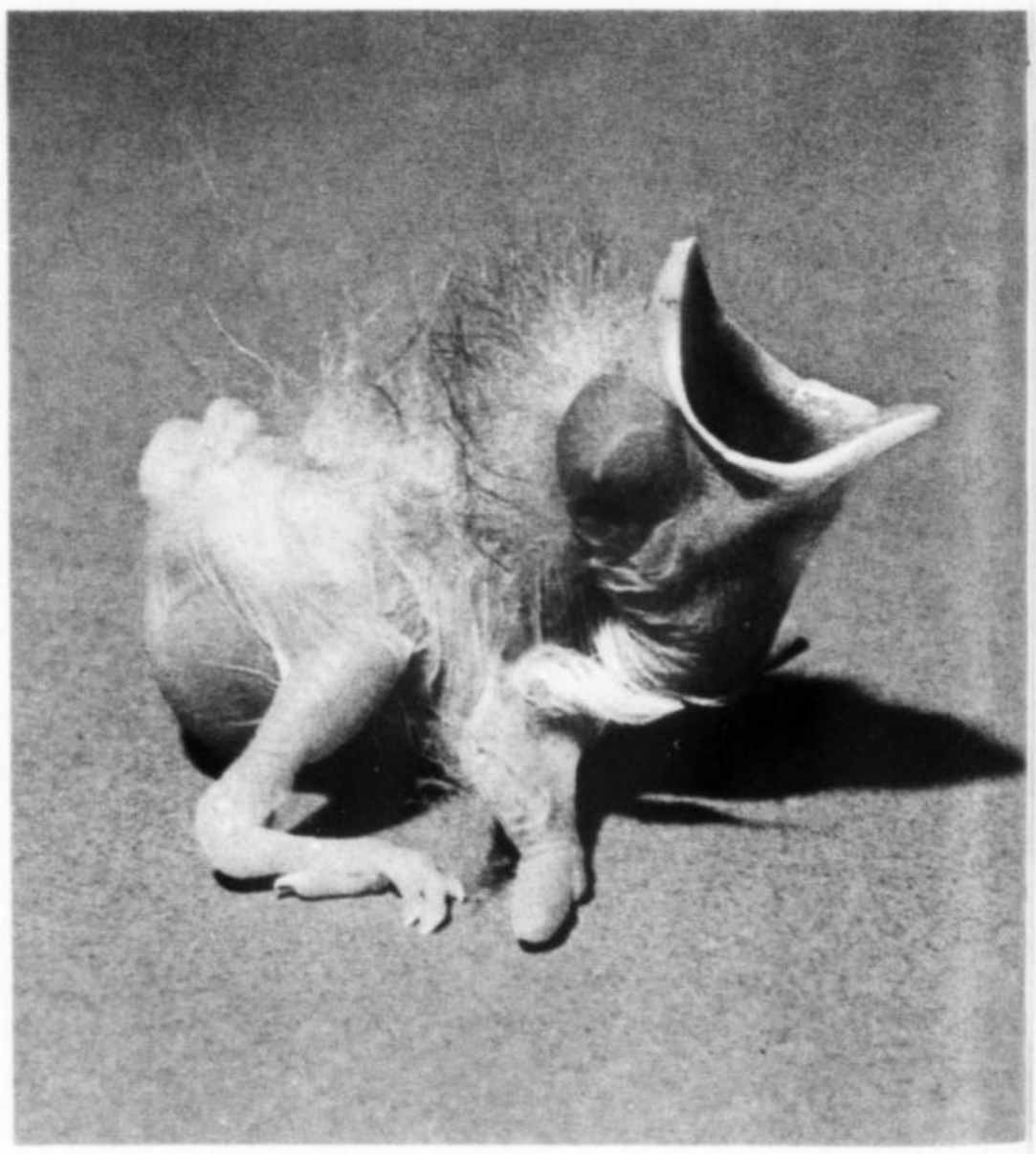
If a mother robin is ready for a husband and his behaviour is acceptable to her, they become mates. Mother robin picks out a place for their nest, which she makes all by herself. She might use bits of string, rags, paper, soda straws or a few slender twigs. Two things Mrs. Robin always uses are dried grasses and mud. While she makes the nest, father robin continues to sing and warn other robins to keep away.

When the nest is finished—it takes about a week—mother robin lays her pretty blue eggs in it, one each day. Four is the usual number. Then she has to sit on them and keep them warm for another twelve days so they will hatch. Her mate does not warm the eggs, but he does go on defending their territory by singing and chasing away strange robins. The eggs must not be disturbed by people.

It's a special time when the baby robins begin to peck their way out of the eggs. Mother robin stays near. When an egg is cracked open, she might even tug at it to help the infant get out.

Father and mother robin search everywhere for earthworms, insects and berries to feed their hungry babies. They grow so rapidly that they are ready to fly in

*This baby robin, just out of the egg, is hungry already!*



*Baby birds must eat every half hour, so both Mr. and Mrs. Robin are kept busy bringing food to them.*

only two weeks. Now comes the most dangerous time in their lives. Young robins are weak fliers at first and often fall to the ground where cats and dogs can get them.

You can help the robins! Prevent your cat or dog from catching them. Should you find a helpless robin on the ground, pick it up carefully with both hands and put it in a thick bush. The parents will hear its calls and will care for it. Do not try to raise a baby robin. That is a full-time job and the little bird is almost certain to die.

After a week has passed, the little ones are able to take care of themselves. If it is still early in summer, the parents might decide to have a second family. But as autumn draws near, robins get restless and soon we see fewer and fewer. They have begun to fly south for the winter. Yet in spring they will return and gladden us with their songs and interesting ways.

THE END

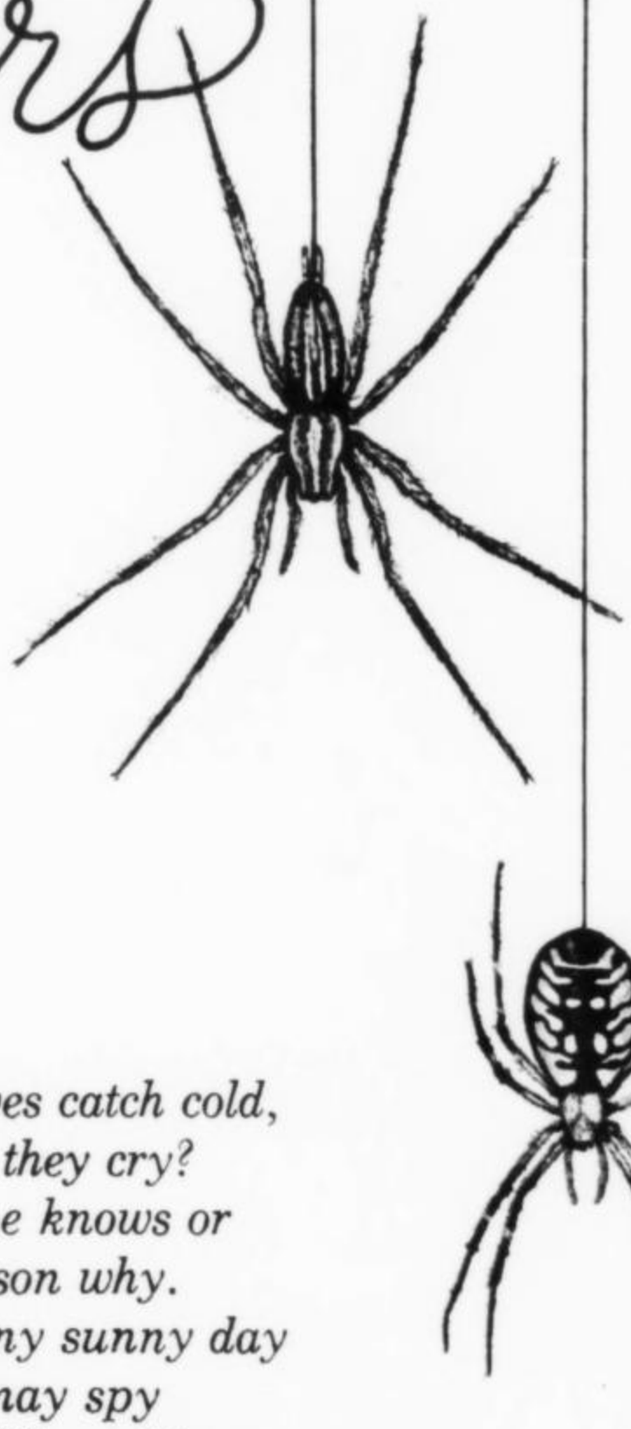
*Editor's note:* Want to help the robins? And have fun too? Cut twine, yarn and worsted into lengths of about 2 inches. Try narrow strips of facial tissue also. Soon after your robins return in spring, hang some pieces on bare tree branches; scatter others on bare ground where they are easily seen. The birds will use them in their nests. What colors do they seem to prefer? Do they choose worsted rather than twine or tissue?

Here's another thing to do. Mix up a big trayful of mud for Mrs. Robin. A large cooky sheet is fine for this. Put it on your lawn where the birds can find it easily, or dig a large but shallow hole and mix some mud in it. This will be a great help to the robins, especially in dry weather.

*This young robin has a spotted breast because robins are a member of the thrush family.*

# Web Weavers

Story and Pictures by Ruth Fagen



Drawing by John Quinn

## Orb Web

You have probably run headfirst into a spider web at one time or another. Did you stop to notice how neatly it had been put together? Because his web is both home and trapping ground to the spider, he works very carefully, often producing a web as beautiful as it is useful. A good example is the web in the picture to the left. It is called the *orb web*, which means that its lines go around and around in circles.

All the lines are made of a very strong silk, the finest thread to be found in nature. It is so strong that if you were to make a rope of it one inch thick, it would be stronger than a one-inch-thick rope made of *iron!*

The orb web usually hangs straight up and down so that flying insects will be caught in it. The circling lines of the web stretch and are very sticky. The spider waits in the center or along the side. When an insect gets caught on the sticky lines, the spider moves along one of the cross lines, which look like the spokes of a wheel. These are not sticky.

Many people are afraid of spiders and would like to kill every one they see. What they do not realize is that spiders are among man's best friends because they eat thousands of harmful insects every year.

*Do elves catch cold,*
*Or do they cry?*
*No one knows or*
*A reason why.*
*But any sunny day*
*You may spy*
*On fields and lawns*
*Out under the sky*
*Their cobweb handkerchiefs*
*Spread out to dry.*

## Grass-Spider Webs

Sometimes if you look out your window on a dewy morning you will see your yard almost carpeted with webs like this one. The *grass spider* weaves this web in almost the same way we weave a piece of cloth. He crosses back and forth from side to side and from top to bottom until a very firm silk sheet is formed. The spider attaches this sheet to blades of grass and little plants nearby. Then he waits for flies and other small insects to get caught in it.

# Let's Talk It Over

April is one of my favorite months of the year. New life seems to be all around us. The birds are returning from the south, trees are producing buds, small flowers are pushing their leaves through the soil and Mother Nature appears to be announcing proudly and loudly: "Winter is over and spring is here!"

This is the time when looking out the window early each morning makes me want to quickly finish my chores and go outdoors to breathe the fresh air and look around to see what the new day has brought.

This magazine is filled with informative stories and pictures of spring; its beauty, its rapidly growing gardens and a variety of other things about it for us to enjoy.

Whether you live in an apartment or a house, this is the time to plant a garden. The story of a "Mini"-Garden of Vegetables on Page 38 tells you how to plant and take care of an outdoor vegetable garden. However, if you have only a window box garden, it will still be a lot of fun to plant vegetables and watch them grow. Of course, you can't plant as big a variety of vegetables in a window box. Onions and lettuce will grow nicely in a shallow box, but carrots and radishes will require a much deeper one because they grow beneath the soil.

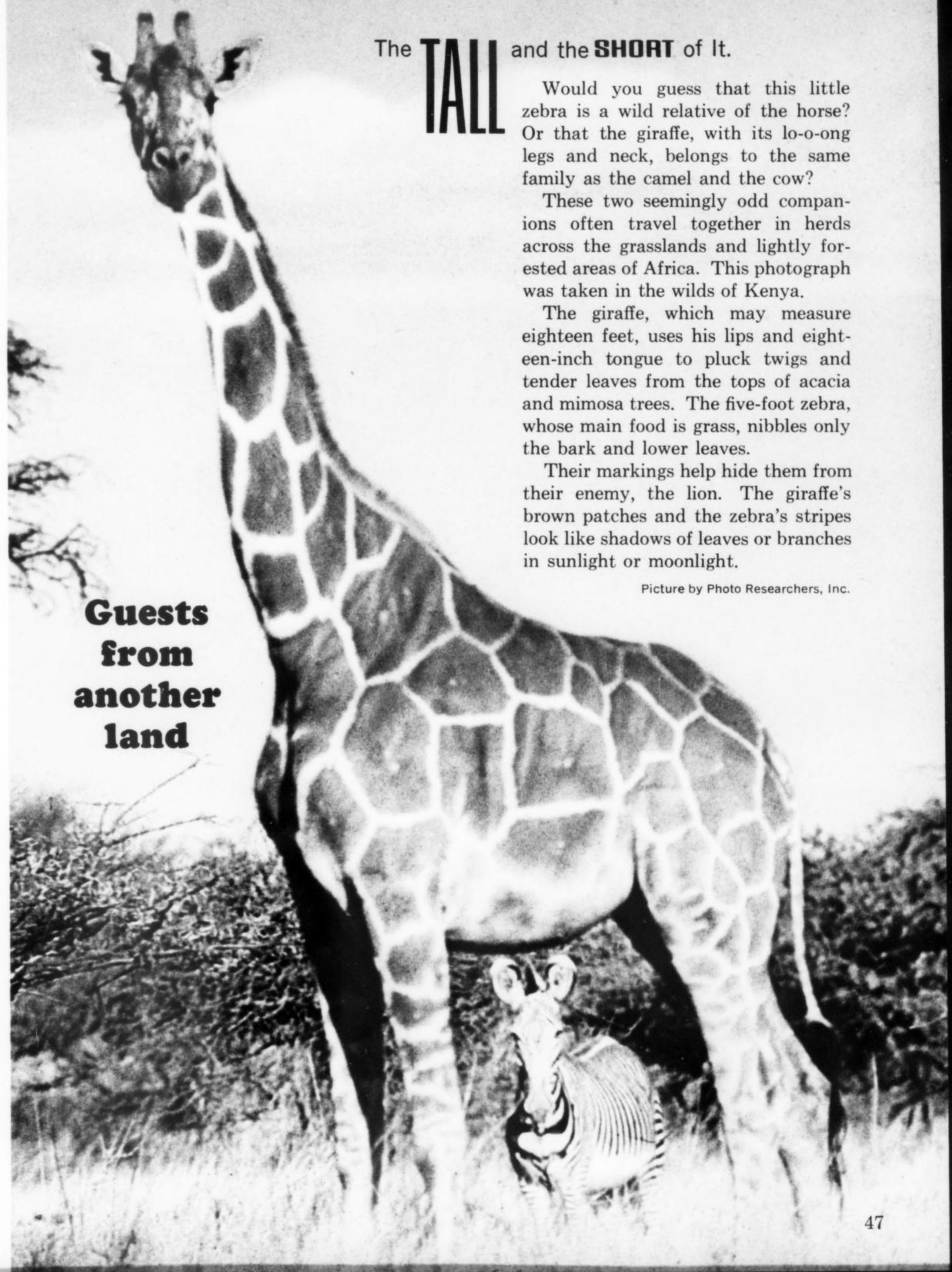
Watching vegetables grow and taking care of them to make sure their growth will be successful is the kind of delightful experience that everyone at home and in school will enjoy.

Plants need sun and rain to grow. I hope you read "What Do You Know About Rain?" on Page 16. Were you surprised to learn that rain comes from the watery earth and not from the sky? Did the information about evaporation and condensation help you understand what happens when it rains? Maybe you and your mother could try the experiment with the teakettle and a long handled pan, and produce "precipitation."

In your class at school your teacher and the other children might be interested in learning how to measure the humidity in the air by making a hygrometer. This can be done by following the directions given in "Water in the Air" on Page 18. An experiment like this one is easy to do, and the information you get from it is helpful in understanding the weather reports given in the newspapers and on radio and television.

Do you save your copies of Ranger Rick's Nature Magazine? I do. They have a very special place on my bookshelf so that I may refer to them when I want to find certain factual information, or just take another look at the many beautiful pictures.

Miss Frances



## The TALL and the SHORT of It.

Would you guess that this little zebra is a wild relative of the horse? Or that the giraffe, with its lo-o-ong legs and neck, belongs to the same family as the camel and the cow?

These two seemingly odd companions often travel together in herds across the grasslands and lightly forested areas of Africa. This photograph was taken in the wilds of Kenya.

The giraffe, which may measure eighteen feet, uses his lips and eighteen-inch tongue to pluck twigs and tender leaves from the tops of acacia and mimosa trees. The five-foot zebra, whose main food is grass, nibbles only the bark and lower leaves.

Their markings help hide them from their enemy, the lion. The giraffe's brown patches and the zebra's stripes look like shadows of leaves or branches in sunlight or moonlight.

Picture by Photo Researchers, Inc.

**Guests from another land**

**In April this young whooping crane leaves Texas on the long flight to his summer home in Canada. You will find the adventure of his flight and his struggle for survival on Page 9.**

Picture by Luther Goldman Courtesy of U.S. Fish and Wildlife Service